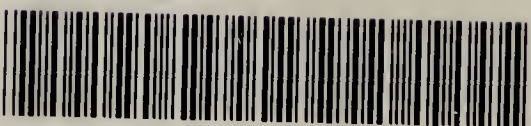


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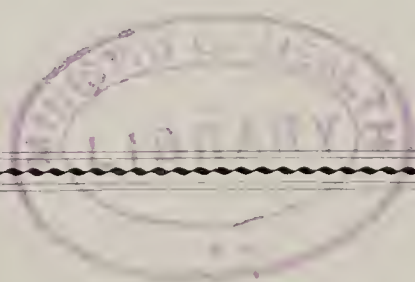


**City Council  
of Nairobi  
K e n y a**

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**The Twenty Sixth Annual Report  
of  
The Medical Officer of Health**

**1955**



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TOWN HALL  
N A I R O B I  
27th July, 1956

The Worshipful the Mayor,  
Aldermen and Councillors,  
City Council of Nairobi.

Your Worship, Aldermen and Councillors,

I have the honour to present to you my Annual Report on the sanitary circumstances, sanitary administration, vital statistics and the state of the public health of the City of Nairobi for the year 1955, as required by the "Municipalities Ordinance, 1948" "The Medical Officers of Health Rules Section 2 (12d)".

A. T. G. THOMAS  
M. D., B. S., D. P. H.,  
Medical Officer of Health.





## **PUBLIC HEALTH COMMITTEE**

**DECEMBER 1955**

Councillor G. B. E. Norburn, F.R.I.B.A. ... *Chairman*

Alderman H. E. Nathoo, M.B.E. ... *Deputy Chairman*

His Worship the Mayor, Alderman I. Somen, M.B.E.,

The Deputy Mayor, Councillor Mrs. E. M. Rayner

Councillor Mrs. M. Needham-Clark

„ Musa Amalemba

„ Ganga Singh Matharu

„ S. Pandit

„ J. S. Patel

The District Commissioner, Mr. A. B. Tannahill, M.C.,

The Officer in Charge, Nairobi Extra Provincial District,

Mr. C. F. Atkins.

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## INTRODUCTION

Quite early in 1955 it became evident that the emergency was receding, and as the weeks went by there was a most noticeable easing of tension and improvement in atmosphere, not only in the city generally, but more importantly, from our point of view, in the African locations.

Coincidentally with this, the outbreak of poliomyelitis, which had been giving rise to much anxiety, began to fade out. The nature and pattern of the outbreak gave some colour to our theory that Nairobi is vulnerable to poliomyelitis and other virus diseases rather more than many places because of its very brisk air traffic. After all, no less than 53,000 people arrive in or pass through Nairobi each year by air, most of them presumably well within the incubation period of many infectious diseases which may have existed at their point of departure.

The phenomenal growth of the city received a new impetus with the diminution of the emergency, although in fact, apart from some labour troubles it was astonishing how little this development has been affected by our troubles. During the year £8,500,000 worth of building plans were dealt with, and it was evident that not only was there a high degree of confidence locally in the future of the city but that people abroad also shared this confidence.

In March discussions with government on the subject of tuberculosis were resumed. Government's attitude was that while they accepted our representations as to the urgency of tackling the problem in the city with vigour as soon as possible, it was also desirable that our work here should be co-ordinated with plans which had been evolved for a country-wide attack on this disease. This view was strengthened by the expectation that substantial aid might become available from the World Health Organisation or U.N.I.C.E.F. It was difficult to disagree with this, but the high level negotiations involved delayed our local plans for a radical attempt to check the

spread of infection in the city. While obviously one does not wish to take too parochial a view, it must be admitted that urbanisation, especially on the scale at which it is occurring in Nairobi, is a very potent factor in the spread of the disease, and the extent of the problem is probably much greater proportionately here than it would be in small urban communities in a more or less rural setting.

Although it has been stated that the impact of the emergency on the general development of the city was less than might have been expected, its effect upon our own capital works programme was disastrous, and certain projects — the establishment of two new African maternity and child welfare centres, the building of an antenatal clinic for the African Maternity Hospital and the four dispensary units, made little progress. By the end of the year no actual work had started. This was particularly unfortunate in regard to the dispensary services, because naturally no improvements could be made to the existing service, whereas the demand for attention grows steadily each year. There are, however, some grounds for hoping that this major reorganisation will be possible during the forthcoming year. Almost as important is its sequel, that is, the taking over by the City Council of the complete reorganisation of the city's ambulance service. The improvement which should be effected by bringing the service, which is now fragmented to a most unwieldy degree, under one central control should not only produce a vast improvement in efficiency but also make its whole operation very much more economic.

Health education has always been regarded as an important function of the health department in this city, rather more important perhaps than in many others, owing to the mixed racial pattern and the casual ideas about hygiene still held by a large bulk of the population. Two notable events occurred in this connection. The first was a health exhibition in April at the Asian Teachers Training College, designed to indoctrinate the school population through their teachers. The usual propaganda methods were used including films, visual exhibits and lectures, and it seems obvious that we must make this an annual event.

The second was an exhibition held in November under the title "Help yourself to Health". This ran for five days and was attended by over 6,000 people. It is pleasing to note that it was financially self-supporting, and it is planned that an exhibition of this kind should also become an annual event. I should like to pay a special tribute to the Deputy Medical Officer of Health, Dr. McAllan and the Food Inspector, Mr. Beechey, and to all staff of the department to whose most strenuous efforts the success of the latter exhibition was due.

Another move forward in our health propaganda arrangements was the obtaining of authority to purchase a quantity of films and film strips on health subjects. These are to be developed into a full reference library, from which material for exhibitions and similar demonstrations can be drawn.

The year saw the inauguration of another experiment, that of the organisation of African health assistants. The implementation of fully (locally) trained African sanitary inspectors had proved over several years most successful, at any rate as far as actual public health work was concerned, although being men of good education they tended to develop political tendencies. Since, however, the supply of fully qualified men was not adequate to fill our establishment, it was decided that a second grade of inspector should be trained under the title "health assistant" and an experiment carried out to see how satisfactorily they would work.

An establishment for twelve was granted by Council and it was possible to fill eight of these posts. At the end of the year four only remained. It was found that these young men, although their position had been carefully explained to them at training school, did not take readily to their junior posts, and expected much higher salaries than their qualifications merited. It was, however, decided to give the arrangement further trial on the principle that it is most desirable to fill as many of the junior vacancies in the department with Africans as is possible, partly on grounds of economy and partly in order to encourage them to seek higher qualifications.

An inevitable effect of the recession of the Emergency was a distinct increase in the demand in the African locations for the services of the maternity and child welfare department and efforts were much embarrassed by the fact that the establishment of clinics has not kept up with the steadily developing areas of new African housing. It is hoped that next year will see the construction of two overdue centres at Mbotela and Ofafa locations.

Similarly, there was an increase of work at the Lady Grigg African Maternity Hospital which had been for some time somewhat in the doldrums. This arose because of the freer movement which the authorities felt they could allow amongst the African population.

It is pleasing to record the award of the M.B.E. to the matron, Miss K. M. Foord, whose management of the hospital during the period of the emergency had been outstandingly creditable.

For some time the inadequacy of the Council's mortuary had been the subject of adverse report and comment, and in June discussions began with a view to establishing a new mortuary in better surroundings and designed to comply with modern ideas and practice. As these discussions proceeded, it emerged that the reorganisation might well include the placing of the whole of the funeral service as well as the mortuary under the control of the public health department, and this is expected to take place with the completion of the new mortuary buildings in 1956.

Possibly the most important feature which will emerge from this reorganisation is that it will be possible to depart from a custom which has prevailed in Kenya ever since it became colonised, that is, the compulsory interment of bodies within 24 hours of death. The



necessity for this procedure will be obviated by the installation of refrigerating plant, and it will mean that persons will be able to be buried, if their relatives so desire it with the same reverent ceremony as in their own country, and relatives who may reside at some distance will be able to attend the funeral.

Coincidentally, discussions took place on the possibility of establishing a crematorium. These arose from three basic considerations. Firstly, that an increasing number of people prefer cremation to burial. Secondly, that a large section of the Nairobi population, the Hindus, at present conduct cremation with meagre facilities, and thirdly that cremation effects economy by the saving of public land which would otherwise have to be devoted to cemeteries.

The governing factor would be the ability to make the service more or less self supporting and the matter was still under consideration at the end of the year.

A satisfactory feature of legislation during the year was that the Council resolved to obtain powers to compel the compulsory conversion of boys' bucket latrines of water borne type, and their connection to septic tanks or sewer where this could be done. These powers were in fact obtained and the department was acting on them before the end of the year.

The staff situation in regard to recruitment has varied with the nature of the post. Two posts in the sanitary inspectorate were filled with some delay, but very satisfactorily. Much difficulty attended recruitment of sisters for the African Maternity Hospital, for a medical superintendent for that institution, and for a medical officer in the African maternity and child welfare department. It could be that recruitment has been affected by the political situation, and if it has, an improvement can be anticipated in the coming year.

As in previous years I have great pleasure in acknowledging the co-operation and help which is always forthcoming from the Director of Medical Services and his staff, in thanking the members of the Council who have supported the work of the department, and in thanking the staff of the department for their loyal and efficient service.

METEOROLOGY

Some Figures of Nairobi Rainfall 1897-1955

Readings taken at Nairobi Railway Station

Average yearly rainfall	1897—1900	...	...	35.10 inches
Average yearly rainfall	1901—1925	...	...	37.81 inches
Average yearly rainfall	1926—1950	...	...	32.33 inches
Total Rainfall for	1951	...	60.08 inches	
Total Rainfall for	1952	...	26.09 inches	
Total Rainfall for	1953	...	21.36 inches	
Total Rainfall for	1954	...	24.18 inches	
Total Rainfall for	1955	...	32.25 inches	

Average Yearly Rainfall 10-Year Periods

1901 to 1910	...	...	...	37.16 inches
1911 to 1920	...	...	...	40.71 inches
1921 to 1930	...	...	...	34.90 inches
1931 to 1940	...	...	...	31.98 inches
1941 to 1950	...	...	...	30.60 inches
1951 to 1955	...	...	...	32.79 inches.

A NOTE ON THE CLIMATE OF NAIROBI CITY

The City of Nairobi is about 5,500 feet high, rather more than 300 miles from the coast, and about 100 miles south of the equator. It is flanked by high ground on the north and west, and by extensive plains to the south and east. The modifying effect of the topography on an otherwise tropical climate is considerable.

The climate displays only relatively minor seasonal variations, but Nairobi's position so far inland results in a large diurnal variation, particularly in temperature and humidity, while its height causes it to be some 13°F. cooler than the coast. The result is a climate which does not have the enervating effect generally associated with the tropics.

The hottest months are February and March, and during this period afternoon temperatures rise 85°F. or more, and very occassionally to nearly 90°F., a figure which has never yet been

SOME METEOROLOGICAL DETAILS — EASTLEIGH AERODROME 1955.  
(From the E.A. Meteorological Department.)

	1955	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Mean												
	Maximum	79.7	80.2	81.1	77.8	75.1	74.8	73.8	76.0	77.4	78.6	76.9	77.7
TEMPERATURE (F)	...												
	Mean												
	Minimum	56.5	56.4	57.2	58.9	57.5	54.7	53.9	53.6	54.5	57.8	56.5	57.0
	Mean	68.1	68.3	69.1	68.3	66.3	64.7	63.9	64.8	65.9	68.2	66.7	67.3
RAINFALL (inches)	...	0.40	4.52	3.14	5.75	3.92	0.00	0.29	0.35	2.90	2.22	3.12	5.64
DAYS OF RAIN	...	3	9	8	16	16	—	4	7	10	6	16	10
AVERAGE RAINFALL OVER 39 YEARS	...	1.40	1.84	4.75	7.98	5.07	1.65	0.58	0.94	0.89	2.07	3.90	2.58
RELATIVE HUMIDITY % (E.A.S.T.)	...	75	69	78	85	84	80	79	76	79	81	80	80
	(1500)	39	43	38	50	58	47	50	45	45	43	50	48
MEAN ATMOSPHERIC (E.A.S.T.)	...	838.3	836.6	836.8	837.2	839.2	839.7	839.2	838.4	838.6	838.6	838.1	838.1
PRESSURE (mbs.)	...	834.6	832.9	833.2	834.0	836.2	836.8	836.5	835.3	834.8	834.6	834.5	834.7



exceeded. The period June to August is invariably one of comparative low day and night temperatures. The average maximum temperature for June is about 72°F.; night-time temperatures are generally about 54°F. giving a mean range of 18°F. The lowest minimum recorded is 44°F. during an August night in 1933, but temperatures much nearer freezing point have been experienced in neighbouring valley situations from time to time.

Relative humidity also has a very marked daily range. In the early morning it frequently reaches saturation and may fall to 10% in the middle of the day on clear sunny days in February or March.

Cloud is least during the period December-March when skies are noons. From April onwards cloud amount increases until in August at the height of the S.E. monsoons the sky may be quite overcast all morning, the cloud only breaking in the afternoon. As cloud usually decreases after midday there is about 30% more sunshine in the afternoon than in the morning, and it follows that westerly slopes receive more sunshine than easterly. The following figures for mean hours of sunshine per day illustrate this point very clearly :—

	<i>Hrs.</i>		<i>Hrs.</i>		<i>Hrs.</i>
January	9.8	May	6.2	September	5.7
February	9.8	June	4.7	October	7.4
April	8.5	July	4.	November	8.4
March	7.2	August	4.1	December	7.1

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The significance of these figures is better appreciated when it is remembered that the sun is above the horizon for about 12 hours per day throughout the year.

The figures for average rainfall given in the table opposite show a distribution with two peaks, one in March—June (the “long rains”) and the other in October—December (the “short rains”). Late December and mid-March is popularly supposed to be the dry season, but there is an appreciable expectancy of rain in this period, a rather greater expectancy in fact than in the cool, dry but cloudy mid-year period. Rainfall is mainly, although not entirely, in the form of afternoon and evening showers, associated at times with thunderstorms. During the months June to September the S.E. Monsoon may bring a dense cap from which light rain sometimes falls for several hours, mainly during the early morning. Very heavy rain of the tropical deluge, type occurs infrequently; when it does it is invariably associated with the more violent type of thunderstorm. In 1951, a very wet year, falls of as much as 5” in 3 hours were experienced in the Nairobi area during the “long rains”. This is however exceptional, falls exceeding 2” in 24 hours being infrequent.

As is general in East Africa, rainfall means can be very misleading. Since several years of short rainfall may follow one another,

means have to be interpreted with some circumspection. Some indication of the range of variation is given by the following extreme falls :—

Highest fall recorded in Nairobi 61.80" in 1930.

Lowest fall recorded in Nairobi 19.13" in 1943.

It is apposite to note at this juncture that the mean annual evaporation from a free water surface in Nairobi is some 36", i.e. a figure comparable with the mean rainfall.

High winds are not common in Nairobi, but during February and March moderately strong east or north-easterly winds prevail, which, combined with very low humidities and high temperatures, makes the few weeks before the rains the most trying of the year.



*One of the commonest causes of mosquito nuisance in the City*

VITAL STATISTICS

General

Area of City	...	...	...	20,480 acres or 32 sq. miles
Population (estimate)	...	...		197,500
Population density per acre	...			9.6

Summary of Vital Statistics

	Estimated population	Deaths	Death rate per 1,000	Live births	Birth rate per 1,000	Infant deaths	Infant mortality rate	Live and still births	Maternal deaths	Death rate per 1,000 births
European	18,500	111	6.00	387	21	7	18	392	1	2.5
Asians	69,000	381	5.52	3,462	50	167	48	3,510	7	2.3
Africans	111,000	1,214	11.03	2,517	23	381	111	2,616	4	1.5
TOTALS	197,500	1,706	8.63	6,366	32	555	88	6,518	12	1.8

Summary of Principal Causes of Death

(Figures in brackets = total deaths)					
Europeans (111)		Asians (381)		Africans (1,214)	
Circulatory	22 = 20%	Under 1 month	106 = 28%	Under 1 month	206 = 17%
Violence	19 = 17%	1 to 12 months	61 = 16%	Infective	181 = 14%
Nervous	12 = 10%	Respiratory	55 = 14%	Violence	204 = 16%
Cancer	10 = 9%	Digestive	43 = 11%	1 to 12 months	175 = 14%

This could well be a reiteration of the statements made in the same section of this report for 1954. It is most distressing to note that 44% of the deaths of Asians was amongst infants under one year.

The struggle against ignorance and poverty is a slow and often discouraging one. But this fact is sure that the leaders of this struggle must be those of intelligence and of high educational attainments and to this end one looks to a large extent to the professional classes. This department has for long been endeavouring to stimulate an interest in the Asian community in raising the standards of midwifery practice and in raising generally the standards of infant care. To this end an appeal was made in writing for the co-operation of the Indian Medical Association. Regretfully it has



to be stated that no interest or effort at co-operation was shown by this Association. No reply was received to the letter written to the them. It is considered that little or no improvement can be achieved without the co-operation of the Asian members of the medical profession; miracles could be achieved with their active help. Virtually no progress is being made at the moment.

The African population, generally, is anxious to learn, to emulate and to progress to more advanced ideas and a higher standard of living. The misfortune is that they appear to be unable to maintain the standards which they often achieve and to apply the things they are taught in practice. Many mothers, for example, who spend most of their lives in the reserve but who, while in Nairobi for a few months of the year and during that time attend our clinics with interest, do not maintain the ways which they willingly learn when attending the clinics in Nairobi; after an absence in the reserve, they and their children return to the clinics with the same old deficiency diseases and requiring to be taught the basic elements of infant welfare all over again. To counteract this pessimistic tone it must be said that each clinic is building around it an increasing number of stable, intelligent and progressing families — a heartening thought.

Outstanding in the European side are reports from our health visitor that many European children are left to the care of ayahs. Constant warnings are given of the dangers of this. It is admitted that economics compel many European women to work — particularly if a family has to be cared for. But, deplorably, the fact remains that many would rather have their grandiose ideas, their big cars, their radiograms and their cocktail parties than their children cared for at a good nursery or creche under European care. When an outrage, resulting from such an unbalanced sense of values occurs, the cry invariably is — “What is the government going to do about this?” Why, indeed, should the government do anything? The responsibility must rest with the parents. If they are not prepared in this country to accept this responsibility, then this is no place for them.



Table 1

**Population Figures 1951 to 1955***(Estimated by East African Statistical Department)*

	1951	1952	1953	1954	1955
Europeans ...	15,000	15,500	16,000	17,500	18,500
Asians	54,000	56,000	60,000	63,000	67,000
Africans	80,000	95,000	100,000	100,000	110,000
	149,000	166,500	176,000	180,000	197,500

Table 2

**Number of Births Notified in 1955**

	RESIDENTS			NON-RESIDENTS		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
	Births	Still-births	Births	Still-births	Births	Still-births
Europeans	188	3	199	2	118	3
Asians	1,806	28	1,656	42	—	35
Africans and Others	1,233	54	1,284	221	17	221
	3,227	85	3,139	67	6,518	15

Table 3

**Birth Rates for Past Five Years**

	1951	1952	1953	1954	1955
Europeans ...	20.2	21.03	18.4	20.9	21.4
Asians ...	57.7	61.0	54.4	51.9	50.8
Africans ...	24.7	19.1	16.1	16.5	23.6

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Table 4

**Infant Mortality Rates for Past Five Years**

	1951	1952	1953	1954	1955
Europeans ...	52	24	20	38	18
Asians ...	52	56	49	50	48
Africans ...	180	299	281	187	111

Table 5

**Death Rates Over Past Five Years**

	1951	1952	1953	1954	1955
Europeans ...	9.9	9.3	6.9	6.45	6.00
Asians ...	8.0	7.8	6.26	6.61	5.52
Africans ...	16.8	15.3	17.60	13.63	11.03
Total	12.9	13.3	12.06	10.48	8.63

Table 6

**Maternal Deaths and Maternal Mortality Rate 1955**

	Live and Still Births	Maternal Deaths	Rate/1,000 Births
Europeans	392	1	2.5
Asians	3,510	7	2.3
Africans	2,616	4	1.5
Totals	6,518	12	1.8

## Summary of the Causes of Deaths

	Europeans	Asians	Africans	Totals	Percentage of all deaths in 1955.	Percentage of all deaths in 1954.	Death Rate 1955.	Death Rate 1954.
1. Infectious and Parasitic Diseases ... ..	3	13	258	274	16.05	17.4	1.38	1.83
2. Cancer and other Tumours	10	10	12	32	1.87	2.37	0.16	0.24
3. Rheumatism, Diseases of Nutrition, etc. ...	4	10	18	32	1.87	1.05	0.16	0.10
4. Diseases of the Blood, etc.	2	16	28	46	2.69	2.32	0.23	0.24
5. Chronic Poisoning and Intoxications ... ..	—	1	5	6	0.35	.15	0.03	0.01
6. Diseases of the Nervous System ... ..	12	25	59	96	5.62	4.65	0.48	0.48
7. Diseases of the Circulatory System ... ..	22	26	23	71	4.16	3.85	0.35	0.40
8. Diseases of the Respiratory System ... ..	7	55	221	283	16.58	20.03	1.43	2.09
9. Diseases of the Digestive System ... ..	9	43	144	196	11.48	11.57	0.99	1.21
10. Diseases of the Genito-Urinary System (non-venereal) ...	9	12	20	41	2.4	1.69	0.2	0.17
11. Diseases of Pregnancy, Childbirth, etc. ...	1	7	4	12	0.7	0.89	0.06	0.09
12. Diseases of the Skin ...	—	1	4	5	0.29	0.21	0.02	0.02
13. Diseases of Bones and Joints ... ..	—	—	—	—	—	0.21	—	0.02
14. Congenital Malformations	—	12	12	24	1.4	1.05	0.12	0.10
15. Diseases peculiar to the First Year of Life ...	5	94	132	261	15.29	9.83	1.32	1.03
16. Senility, old age ...	4	6	8	18	1.05	1.26	0.09	0.13
17. Death from Violence ...	19	38	124	181	10.6	12.84	0.91	1.35
18. Ill-defined Causes ...	4	12	112	128	7.5	8.5	0.6	0.89
TOTAL OF ALL DEATHS	111	381	1214	1706	100.0	100.0	8.63	10.48

# Causes of Infant Deaths

*Under one month.*

International			Europeans	Asians	Africans	Total
List No.	Cause					
12.	Tetanus	...	—	—	1	1
30.	Congenital syphilis	...	—	—	7	7
73.	Anaemia	...	—	—	1	1
84.	Mongolism	...	—	—	1	1
92.	Mitral stenosis	...	—	—	1	1
107.	Broncho pneumonia	...	—	4	8	12
108.	Double pneumonia	...	—	1	—	1
109.	Pneumonia — undefined	...	—	4	5	9
119.	Gastro enteritis	...	—	1	2	3
122.	Intestinal obstruction	...	—	1	—	1
125.	Portal pyaemia	...	—	—	1	1
129.	Peritonitis	...	—	—	1	1
141.	Miscarriage	...	—	1	—	1
149.	Caesarian section	...	—	—	1	1
152.	Abdominal infection	...	—	—	1	1
157.	Hydrocephalus	...	—	—	2	2
157.	Congenital deformity	...	—	5	1	6
157.	Pulmonary collapse	...	—	1	—	1
157.	Intestinal obstruction	...	—	—	2	2
157.	Congenital heart diseases	...	—	2	5	7
158.	Marasmus	...	—	1	7	8
158.	Debility	...	—	—	1	1
159.	Prematurity	...	4	68	115	187
159.	Immaturity	...	—	1	—	1
160.	Birth injuries	...	1	—	8	9
160.	Delayed in 2nd stage .....	...	—	—	1	1
160.	Cerebral injury	...	—	—	1	1
160.	Difficult delivery	...	—	—	2	2
160.	Intra-cranial injury	...	—	4	—	4
160.	Congenital haemorrhage	...	—	3	1	4
160.	Intra-cranial meningitis	...	—	—	1	1
161.	Maternal toxæmia	...	—	1	—	1
161.	Icterus neonatorum	...	—	—	3	3
161.	Atelectasis	...	—	1	9	10
161.	Congenital sepsis	...	—	—	1	1
161.	Asphyxia neonatorum	...	—	3	—	3
161.	Haematemesis	...	—	—	2	2
161.	Jaundice	...	—	2	—	2
161.	Intestinal haemorrhage	...	—	1	—	1
161.	Infantile oedema	...	—	—	2	2
195.	Complete neglect	...	—	—	1	1
200.	Unknown	...	—	—	7	7
200.	Natural causes	...	—	—	4	4
200.	Heart failure	...	—	1	—	1
			5	106	206	317

## Causes of Infant Deaths

From one month to one year.

International List No.	Cause	Europeans	Asians	Africans	Total
1.	Clinical typhoid ...	—	—	1	1
9.	Whooping cough ...	—	—	6	6
12.	Tetanus ...	—	—	1	1
13.	Clinical pulmonary tuberculosis	—	—	1	1
13.	Pulmonary tuberculosis ...	—	—	1	1
13.	Tuberculous broncho pneumonia	—	—	4	4
14.	Tuberculous meningitis ...	—	—	1	1
27.	Bacillary dysentery ...	—	—	4	4
28.	Malaria ...	—	—	1	1
30.	Congenital syphilis ...	—	—	1	1
33.	Influenzal broncho pneumonia	—	—	1	1
33.	Influenzal meningitis ...	—	—	2	2
35.	Measles ...	—	—	4	4
69.	Kwashiokor ...	—	—	1	1
72.	Thrombocytopenia ...	—	1	—	1
72.	Infantile purpura ...	—	—	1	1
73.	Acute anaemia ...	—	—	2	2
73.	Anaemia ...	—	2	1	3
73.	Sickle-cell anaemia ...	—	—	1	1
73.	Megalocytic anaemia ...	—	—	1	1
81.	Menengitis ...	—	—	1	1
81.	Pneumococcal meningitis ...	—	—	5	5
82.	Progressive spinal muscular atrophy	1	—	—	1
84.	Mongolism ...	—	—	1	1
86.	Convulsions ...	—	1	—	1
89.	Mastoiditis ...	—	—	1	1
106.	Bronchitis ...	—	—	4	4
107.	Broncho pneumonia ...	—	10	42	52
108.	Lobar pneumonia ...	—	—	4	4
108.	Bilateral pneumonia ...	—	—	2	2
109.	Pneumonia, undefined ...	—	8	8	16
115.	Tonsillitis ...	—	—	1	1
118.	Pyloric stenosis ...	—	1	—	1
119.	Diarrhoea ...	—	9	6	15
119.	Gastro enteritis ...	—	11	39	50
119.	Enteritis ...	—	—	3	3
123.	Intestinal haemorrhage ...	—	1	—	1
124.	Cirrhosis of liver ...	—	1	—	1
130.	Nephritis (acute) ...	1	—	—	1
133.	Hydro-nephrosis ...	—	1	—	1
157.	Congenital deformity ...	—	1	—	1
157.	Congenital heart disease ...	—	1	1	2
157.	Congenital pulmonary stenosis	—	1	—	1
157.	Hydrocephalus ...	—	1	—	1
157.	Pylorospasm ...	—	—	1	1
158.	General debility ...	—	6	4	10
159.	Prematurity ...	—	2	2	4
159.	Immaturity ...	—	—	1	1
161.	Icterus neonatorum ...	—	1	—	1
182.	Asphyxia ...	—	1	—	1
195.	Post-vaccinal encephalitis ...	—	—	1	1
200.	Natural causes ...	—	—	6	6
200.	Unknown ...	—	—	6	6
200.	Ill-defined ...	—	—	1	1
200.	Respiratory failure ...	—	1	—	1
		2	61	175	238



# Causes of Deaths

(Corrected for Outward Transfer)

## International Classification

### Group I.

### Infectious and Parasitic Diseases

International List No.	Cause	Europeans	Asians	Africans	Total
1.	Typhoid	—	—	14	14
1.	Clinical typhoid	—	2	3	5
6.	Cerebro-spinal meningitis	—	—	18	18
9.	Whooping cough	—	—	27	27
10.	Diphtheria	—	—	2	2
12.	Tetanus	—	1	4	5
13.	Pulmonary collapse	1	—	—	1
13.	Tuberculous broncho pneumonia	—	—	13	13
13.	Pulmonary tuberculosis	—	1	44	45
13.	T.B. chest	—	—	1	1
13.	Primary tuberculosis	—	—	2	2
13.	Clinical tuberculosis	—	—	2	2
13.	Tuberculosis	—	—	4	4
13.	Haemoptysis	—	1	1	2
13.	T.B. lung	—	—	1	1
13.	Clinical pulmonary tuberculosis	—	—	2	2
14.	Tuberculosis meningitis	—	1	7	8
15.	Ascites	—	—	1	1
15.	Tuberculous peritonitis	—	—	2	2
21.	T.B. oesophagus	—	—	1	1
22.	Generalised tuberculosis	—	—	11	11
22.	Chronic tuberculosis	—	—	1	1
22.	Miliary tuberculosis	—	—	6	6
24.	Pyæmia	—	—	1	1
24.	Septicæmia	—	1	2	3
27.	Bacillary dysentery	—	—	17	17
27.	Clinical bacillary dysentery	—	—	4	4
27.	Dysentery	—	1	6	7
27.	Shigella flexner	—	—	4	4
28.	Cerebral malaria	—	1	6	7
28.	Malaria	1	—	5	6
29.	Trypanosomiasis	—	—	1	1
30.	Congenital syphilis	—	—	8	8
30.	Syphilis	—	—	2	2
30.	General paralysis of the insane	—	1	14	15
30.	Aneurysm	—	1	—	1
30.	Syphilitic heart disease	—	—	1	1
30.	Rupture of aorta	—	—	1	1
33.	Influenzal broncho pneumonia	—	—	3	3
33.	Influenzal meningitis	—	—	3	3
33.	Influenzal pneumonia	—	1	—	1
33.	Influenza	1	—	1	2
35.	Measles	—	—	8	8
38.	Hydrophobia	—	1	—	1
38.	Chicken pox	—	—	1	1
42.	Schistosomiasis	—	—	2	2
44.	Hodgkin's disease	—	—	1	1
		3	13	258	274

## Group II.

### Cancer and other Tumours

International List No.	Cause	Europeans	Asians	Africans	Total
45.	Carcinoma of jaw ...	—	1	—	1
46.	Carcinoma of bladder ...	—	1	—	1
46.	Cancer of stomach ...	2	1	—	3
46.	Carcinoma of liver ...	—	—	1	1
46.	Carcinoma of pancreas ...	—	—	1	1
46.	Cancer of oesophagus ...	—	—	4	4
46.	Cancer of colon ...	—	1	—	1
46.	Cancer of rectum ...	1	1	2	4
46.	Cancer of bowel ...	—	1	—	1
48.	Carcinoma of uterus ...	—	2	—	2
50.	Cancer of breast ...	2	1	—	3
55.	Carcinomatosis ...	2	—	2	4
55.	Bronchial carcinoma ...	1	—	—	1
56.	Cerebral tumour ...	—	—	1	1
56.	Brain tumour (non-malignant) ...	1	—	1	2
57.	Brain tumour (undetermined) ...	1	—	—	1
57.	Vesicle neoplasm ...	—	1	—	1
Totals		10	10	12	32

## Group III.

### Rheumatism, Diseases of Nutrition and of the Endocrine Glands and Vitamin Deficiency Diseases, General Diseases

International List No.	Cause	Europeans	Asians	Africans	Total
58.	Rheumatic fever ...	1	1	—	2
58.	Rheumatic endocarditis ...	—	1	—	1
59.	Rheumatic arthritis ...	1	—	—	1
61.	Diabetes mellitis ...	2	3	—	5
61.	Diabetes ...	—	3	—	3
61.	Diabetic coma ...	—	2	—	2
69.	Pellagra ...	—	—	2	2
69.	Kwashiokor ...	—	—	16	16
Totals		4	10	18	32

## Group IV.

### Diseases of the Blood and Blood-forming Organs

International List No.	Cause	Europeans	Asians	Africans	Total
72.	Infantile purpura ...	—	—	1	1
72.	Thrombocytopenia ...	—	1	—	1
72.	Haemophilia ...	—	1	—	1
73.	Gross anaemia ...	—	—	1	1
73.	Sickle-cell anaemia ...	—	—	3	3
73.	Anaemia (aplastic) ...	—	1	—	1
73.	Anaemia (megalocytic) ...	—	—	2	2
73.	Anaemia ...	—	8	6	14
73.	Anaemia (secondary) ...	—	—	4	4
73.	Anaemia (acute) ...	—	—	3	3
73.	Acute haemolytic anaemia ...	1	—	—	1
73.	Cooley's erythroblastic anaemia ...	—	1	—	1
73.	Anaemia (chronic) ...	—	—	2	2
73.	Pernicious anaemia ...	—	—	1	1
73.	Nutritional anaemia ...	—	—	1	1
74.	Acute leukaemia ...	—	—	1	1
74.	Myeloid leukaemia ...	—	4	1	5
75.	Ruptured spleen ...	1	—	2	3
Totals		2	16	28	46

## Group V.

### Chronic Poisoning and Intoxication

International

List No.	Cause	Europeans	Asians	Africans	Total
77.	Intoxication ...	—	—	1	1
77.	Acute alcoholism	—	—	1	1
78.	Hypertensive encephalopathy	—	1	—	1
78.	Encephalopathy ...	—	—	1	1
79.	Methyl alcohol poisoning ...	—	—	2	2
Totals		—	1	5	6

## Group VI.

### Diseases of the Nervous System

International

List No.	Cause	Europeans	Asians	Africans	Total
80.	Brain abscess ...	—	—	2	2
80.	Cerebral tumour ...	1	—	—	1
80.	Encephalitis ...	—	—	2	2
81.	Meningitis ...	—	1	7	8
81.	Meningitis (pneumococcal) ...	—	—	17	17
81.	Meningitis (acute) ...	—	—	1	1
82.	Progressive muscular atrophy	1	—	—	1
83.	Cerebral haemorrhage ...	3	5	5	13
83.	Cerebral thrombosis ...	7	1	1	9
83.	Sub-arachnoid haemorrhage	—	1	1	2
83.	Hemiplegia ...	—	1	3	4
83.	Cerebral embolism ...	—	1	—	1
83.	Extra-dural haemorrhage ...	—	—	2	2
83.	Rupture of brain ...	—	—	1	1
83.	Sub-dural haemorrhage ...	—	1	1	2
83.	Congestive heart failure ...	—	5	2	7
83.	Congestive seizure ...	—	2	2	4
83.	Apoplexy ...	—	1	—	1
84.	Mongolism ...	—	—	2	2
84.	Schizophrenia ...	—	—	4	4
84.	Mental deficiency ...	—	—	1	1
85.	Status epilepticus ...	—	2	4	6
85.	Epilepsy ...	—	1	—	1
86.	Convulsions (under 5 years)	—	1	—	1
87.	Paralysis agitans ...	—	1	—	1
87.	Convulsions ...	—	1	—	1
89.	Mastoiditis	—	—	1	1
Totals		12	25	59	96

## Group VII.

### Diseases of the Circulatory System

International List No.	Cause	Europeans	Asians	Africans	Total
90.	Percarditis (constructive) ...	—	2	1	3
91.	Subacute bacterial endocarditis ...	—	—	1	1
92.	Mitral disease ...	1	—	1	2
92.	Mitral stenosis ...	1	—	9	10
92.	Aortic incompetence ...	—	—	2	2
92.	Chronic rheumatism ...	—	1	—	1
93.	Myocarditis ...	—	2	1	3
93.	Myocardial infarction ...	—	4	—	4
93.	Cardio vascular degeneration ...	1	—	—	1
94.	Coronary artery diseases ...	1	—	—	1
94.	Intra-cranial thrombosis ...	—	—	1	1
94.	Coronary thrombosis ...	8	13	—	21
94.	Coronary occlusion ...	1	—	—	1
95.	Auricular defect ...	—	—	1	1
95.	Left ventricular failure ...	1	1	—	2
95.	Ventricular fibrillation ...	—	—	1	1
95.	Auricular fibrillation ...	1	—	1	2
95.	Heart enlargement ...	—	1	—	1
97.	Arteriosclerosis ...	3	—	—	3
97.	Cerebral arterio sclerosis ...	1	—	—	1
99.	Ruptured artery ...	—	—	1	1
102.	Hypertension ...	—	2	2	4
102.	Hyperpiesis ...	2	—	—	2
102.	Essential hypertension ...	1	—	—	1
103.	Intra abdominal haemorrhage ...	—	—	1	1
Totals		22	26	23	71

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## Group VIII.

### Diseases of the Respiratory System

International List No.	Cause	Europeans	Asians	Africans	Total
105.	Acute laryngitis ...	—	—	1	1
106.	Acute bronchitis ...	1	—	—	1
106.	Chronic bronchitis ...	1	—	—	1
106.	Bronchitis ...	—	—	12	12
107.	Broncho pneumonia ...	1	20	116	137
107.	Acute purulent broncho pneumonia ...	—	1	—	1
107.	Aspiration pneumonia ...	—	—	1	1
108.	Double pneumonia ...	—	1	1	2
108.	Bilateral pneumonia ...	—	—	5	5
108.	Lobar pneumonia ...	1	2	29	32
108.	Terminal pneumonia ...	—	—	1	1
108.	Terminal broncho pneumonia ...	—	—	3	3
109.	Pneumonia ...	—	21	41	62
109.	Broncho plural fistula ...	—	—	1	1
109.	Unresolved pneumonia ...	—	1	—	1
111.	Pulmonary embolism ...	—	2	2	4
111.	Pulmonary oedema ...	1	—	5	6
111.	Congestion of lung ...	—	—	1	1
111.	Hypostatic pneumonia ...	1	—	—	1
111.	Acute pulmonary oedema ...	—	2	1	3
112.	Asthma ...	—	3	—	3
112.	Bronchial asthma ...	—	1	—	1
113.	Chronic emphysema ...	—	1	—	1
114.	Polycystic lung ...	1	—	—	1
114.	Lung abscess ...	—	—	1	1
Totals		7	55	221	283



## Group IX.

### Diseases of the Digestive System

International List No.	Cause		Europeans	Asians	Africans	Total
115.	Tonsillitis	...	—	—	1	1
117.	Duodenal ulcer	...	1	1	—	2
118.	Vomiting	...	—	1	—	1
118.	Pyloric stenosis	...	—	1	—	1
119.	Enteritis (under 2)	...	—	—	9	9
119.	Gastro enteritis	...	1	14	67	82
119.	Diarrhoea (under 2)	...	—	9	11	20
120.	Diarrhoea (over 2)	...	—	1	4	5
120.	Acute diarrhoea (over 2)	...	—	—	1	1
120.	Acute enteritis (over 2)	...	—	—	3	3
120.	Gastro enteritis (over 2)	...	—	2	18	20
120.	Enteritis (over 2)	...	—	—	1	1
120.	Acute gastro enteritis (over 2)	...	1	—	—	1
120.	Ulcerative colitis	...	1	—	—	1
120.	Colitis	...	1	—	—	1
121.	Paralytic ileus	...	1	—	—	1
122.	Volvulus of large and small intestine	...	1	—	—	1
122.	Intestinal obstruction	...	—	3	2	5
122.	Strangulated hernia	...	—	—	2	2
123.	Intestinal haemorrhage	...	—	1	—	1
123.	Bowel abscess	...	1	—	—	1
123.	Intestinal perforation	...	—	—	2	2
123.	Gangrene of rectum	...	—	—	1	1
123.	Colostomy	...	—	—	1	1
123.	Gangrene of small intestine	...	—	—	1	1
124.	Alcoholic intoxication	...	—	—	1	1
124.	Cirrhosis of liver	...	—	5	3	8
125.	Liver abscess	...	—	—	1	1
125.	Infective hepatitis	...	—	—	5	5
125.	Jaundice	...	—	1	—	1
125.	Hepatitis	...	—	1	—	1
125.	Subacute necrosis of liver	...	—	—	1	1
125.	Toxic hepatitis	...	—	—	1	1
125.	Portal pyaema	...	—	—	1	1
125.	Amoebic abscess	...	—	—	1	1
129.	Peritonitis	...	1	1	6	8
129.	Acute peritonitis	...	—	2	—	2
Totals			9	43	144	196

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## Group X.

### Diseases of the Urinary and Genital System (Non Venereal)

International List No.	Cause		Europeans	Asians	Africans	Total
130.	Acute nephritis	...	1	4	—	5
130.	Sub-acute nephritis	...	—	—	1	1
131.	Chronic nephritis	...	1	3	4	8
131.	Chronic kidney condition	...	—	1	—	1
131.	Renal failure	...	—	1	—	1
132.	Nephritis	...	1	—	4	5
132.	Uraemia	...	4	2	3	9
133.	Renal tumour	...	1	—	—	1
133.	Hydro nephrosis	...	—	1	—	1
135.	Vesico vaginal fistula	...	—	—	2	2
136.	Ruptured uterus	...	—	—	2	2
137.	Enlarged prostate	...	1	—	3	4
138.	Scrotal cellulitis	...	—	—	1	1
Totals			9	12	20	41

**Group XI.****Diseases of Pregnancy, Child Birth  
and the Puerperal State**

International List No.	Cause		Europeans	Asians	Africans	Total
141.	Miscarriage	...	—	1	—	1
142.	Ectopic gestation	...	—	—	1	1
143.	Intra uterine haemorrhage	...	1	—	—	1
144.	Toxaemia of pregnancy	...	—	1	1	2
146.	Post partum haemorrhage	...	—	2	—	2
147.	Puerperal sepsis	...	—	1	—	1
148.	Post partum eclampsia	...	—	—	1	1
149.	Delivery of twins	...	—	1	—	1
149.	Obstetric shock	...	—	1	—	1
149.	Caesarian birth	...	—	—	1	1
Totals			1	7	4	12

**Group XII.****Diseases of the Skin and Cellular  
Tissue**

International List No.	Cause		Europeans	Asians	Africans	Total
151.	Boils on neck	...	—	—	1	1
152.	Cervical abscess	...	—	—	1	1
152.	Abdominal infection	...	—	—	1	1
153.	Erythema bullosum	...	—	1	—	1
153.	Acute allergic pemphigus	...	—	—	1	1
Totals			—	1	4	5

**Group XIII.****Diseases of the Bones and Organs of  
Movement**

International List No.	Cause		Europeans	Asians	Africans	Total
154.	NIL	...	—	—	—	—
155.	NIL	...	—	—	—	—
156.	NIL	...	—	—	—	—
Totals			—	—	—	—

**Group XIV.****Congenital Malformations**

International List No.	Cause		Europeans	Asians	Africans	Total
157.	Pulmonary collapse	...	—	1	—	1
157.	Congenital heart disease	...	—	3	6	9
157.	Congenital deformity	...	—	6	1	7
157.	Hydrocephalus	...	—	1	2	3
157.	Intestinal obstruction	...	—	—	2	2
157.	Congenital pulmonary stenosis	...	—	1	—	1
157.	Pylorospasm	...	—	—	1	1
Totals			—	12	12	24

## Group XV.

### Diseases Peculiar to the First Year of Life

International

List No.	Cause		Europeans	Asians	Africans	Total
158.	Marasmus	...	—	1	7	8
158.	Debility	...	—	6	5	11
159.	Prematurity	...	4	70	118	192
159.	Immaturity	...	—	1	1	2
160.	Birth injuries	...	1	—	8	9
160.	Difficult delivery	...	—	—	2	2
160.	Intracranial meningitis	...	—	—	1	1
160.	Delayed in 2nd stage	...	—	—	1	1
160.	Intracranial injury	...	—	4	—	4
160.	Congenital haemorrhage	...	—	3	1	4
160.	Cerebral injury	...	—	—	1	1
161.	Haematemesis	...	—	—	2	2
161.	Jaundice	...	—	2	—	2
161.	Intestinal haemorrhage	...	—	1	—	1
161.	Icterus neonatorum	...	—	1	3	4
161.	Atelectasis	...	—	1	9	10
161.	Asphyxia neonatorum	...	—	3	—	3
161.	Maternal toxæmia	...	—	1	—	1
161.	Infantile oedema	...	—	—	2	2
161.	Congenital sepsis	...	—	—	1	1
Totals			5	94	162	261

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## Group XVI.

### Senility, Old Age

International

List No.	Cause		Europeans	Asians	Africans	Total
162.	Senility	...	4	5	7	16
162.	Senile cachexia	...	—	1	1	2
Totals			4	6	8	18

**Group XVII.****Deaths from Violence.**

International List No.	Cause	Europeans	Asians	Africans	Total
163.	Suicide by overdose of drug	1	—	—	1
163.	Carbon monoxide poisoning	—	—	1	1
163.	Poisoning by toxic substance	—	1	—	1
166.	Homicide by firearms ...	1	1	17	19
167.	Homicide by stab wounds ...	—	—	4	4
167.	Murder ...	1	5	6	12
168.	Strangulation ...	—	—	10	10
169.	Railway accident ...	—	—	7	7
170.	Traffic accident ...	7	8	45	60
173.	Air accident ...	6	—	—	6
176.	Industrial accident ...	—	—	1	1
178.	Industrial poisoning ...	—	—	1	1
179.	Morphine poisoning ...	—	1	—	1
179.	Alcoholic poisoning ...	—	—	3	3
181.	Burns ...	—	13	4	17
182.	Asphyxia (accident) ...	—	1	1	2
183.	Drowning ...	—	1	2	3
184.	Gunshot wounds (accident) ...	2	—	—	2
186.	Severe head injury (accidental fall) ...	—	1	—	1
189.	Starvation ...	—	1	1	2
193.	Electrocution ...	—	2	3	5
194.	Wasp bites ...	—	—	1	1
195.	Fracture of spine ...	—	—	2	2
195.	Fractured skull ...	1	2	10	13
195.	Head injury (accidental blow) ...	—	—	1	1
195.	Crushed fractured pelvis ...	—	—	1	1
195.	Post vaccinal encephalitis ...	—	—	1	1
195.	Anaesthetic ...	—	1	—	1
195.	Complete neglect ...	—	—	1	1
198.	Judicial hanging ...	—	—	1	1
Totals		19	38	124	181

**Group XVIII.****Ill defined causes of Death**

International List No.	Cause	Europeans	Asians	Africans	Total
199.	Sudden death ...	1	—	—	1
200.	Natural cause ...	2	—	19	21
200.	Unknown, ill defined ...	—	1	48	49
200.	Malnutrition (over 1 year) ...	—	—	21	21
200.	Marasmus ...	—	—	2	2
200.	Insanity ...	—	—	1	1
200.	General debility ...	—	1	1	2
200.	Post partum shock ...	—	—	1	1
200.	Surgical shock ...	—	—	1	1
200.	Surgical interference ...	—	—	1	1
200.	Fever ...	—	1	—	1
200.	Cachexia ...	—	—	2	2
200.	Chronic cachexia ...	—	1	—	1
200.	Ascites ...	1	—	—	1
200.	Asphyxia ...	—	—	3	3
200.	Heart failure ...	—	6	8	14
200.	Respiratory failure ...	—	1	—	1
200.	Myocardial failure ...	—	1	4	5
Totals		4	12	112	128



NOTIFIABLE DISEASES

Notifiable Diseases, by Races

Diseases		Euro- peans	Asians	Afri- cans	Total 1955	Totals for previous years			
						1954	1953	1952	1951
Anthrax	...	—	2	9	11	6	7	10	16
Beri-beri	...	—	—	—	—	—	—	—	1
Blackwater Fever	...	—	—	2	2	2	—	4	2
Cerebro-spinal Fever	...	1	8	144	153	30	1	2	11
Chickenpox	...	38	9	59	106	70	238	55	531
Diphtheria	...	1	1	3	5	5	13	30	16
Dysentery, Amoebic	...	3	1	14	18	31	56	75	57
Dysentery, Bacillary	...	102	12	352	466	562	564	344	316
Encephalitis	...	—	—	4	4	5	—	—	—
Erysipelas	...	—	—	1	1	3	2	1	1
Infective Hepatitis	...	5	1	15	21	18	—	5	—
Kala-Azar	...	—	—	—	—	4	—	1	—
Leprosy	...	—	—	2	2	3	9	—	13
Malta Fever	...	3	—	3	6	5	4	6	4
Ophthalmia Neonatorum		—	—	77	77	55	23	19	11
Para-typhoid	...	—	—	—	—	—	—	10	1
Poliomyelitis	...	13	1	5	19	116	20	32	9
Puerperal Fever	...	—	3	1	4	1	1	6	5
Relapsing Fever	...	—	—	—	—	1	—	5	8
Salmonellosis	...	—	—	9	9	31	—	—	—
Scarlet Fever	...	1	—	—	1	—	4	2	1
Smallpox	...	—	—	—	—	—	—	—	1
Tick Typhus	...	17	—	1	18	9	4	24	15
Trypanosomiasis	...	2	—	2	4	1	—	1	2
Tuberculosis	...	4	15	264	283	303	472	361	405
Typhoid	...	7	11	155	173	339	151	38	74
Totals		197	64	1,122	1,383	1,600	1,569	1,039	1,500

The incidence of infectious diseases shows little or no change over previous years. It is disappointing perhaps that bacillary dysentery remains so prominent when to a large extent this is preventable by personal hygiene and by social conscience. There is no doubt, however, that improvements in the sanitary conditions of the town will be of immense value—a great increase in the sewage system so that bucket latrines and open sullage water drains can be done away with is particularly important.

\* \* \* \*

Tuberculosis remains a great and menacing problem and is one which should, indeed must, be tackled very soon. The longer it is left the greater will be the expense and difficulty in bringing it under control in the end.

There was a severe outbreak of acute anterior poliomyelitis in one of the schools. The school has about 500 pupils, half being day boys and half being boarders. Immediate investigations were made after the first notification and it was suspected that the source of infection might be from one of the African kitchen staff whose wife and child had arrived in Nairobi from up-country approximately twelve days before the first case was notified. Stool samples were taken from the wife and child and sent to South Africa where the virus was isolated. Meanwhile, the wife and child were sent home and the husband was removed from the kitchen. This action, it appeared, controlled the outbreak.

No closure order was made for the school but many parents withdrew their children. The school authorities were extremely co-operative—a fact much appreciated by this department.

\* \* \* \*

As a result of this epidemic and an outbreak of dysentery at a girls school, thorough inspections were made of all school kitchens. Many were highly unsatisfactory and the co-operation of the Education Department in effecting improvements was sought. The Education Department may have taken action on our letter to them but no acknowledgement (or any approach) was made of our offers of assistance. In many cases the kitchens were antiquated, poorly equipped and poorly supervised. But perhaps kitchen hygiene is not of much importance in educational establishments where the stress may be on mental indigestion!

## MALARIA AND YELLOW FEVER CONTROL

## MALARIA CONTROL

The year proved uneventful with a lower than average rainfall and almost complete absence of vector Anophelines in both larval and adult form. (See graph—Pages 130-131).

Rainfall was in fact heavier than in 1954 with 32.25 inches but was more evenly distributed throughout the year. The meteorological table at the beginning of this report gives greater detail.

The services of one European Inspector were dispensed with at the beginning of the year and it was decided as an experiment to try out two educated Africans as assistants to Mr. Gocs who has many years experience in this work. Unfortunately, only one suitable person could be found from the very many applicants for the post, most of whom had no educational qualifications approaching those required. This man expressed his willingness to undertake training and appears to be making progress. In 1956 it is hoped to send him to the East Africa Malaria Unit at Amani for an advanced course on Malaria Control, it will remain to be seen how he reacts to responsibility and the handling of his fellow Africans.

Larvicidal treatment of breeding places continued to be the method of control and was carried out by a variety of methods, H.S. Malariol being the main stand by. Other methods were plaster of Paris cubes impregnated with B.H.C., sawdust soaked in old engine oil and for heavy Culicine breeding Dieldrin and Coopers Anti-Malarial Fluid. The B.H.C. cubes proved most effective in the many rock pools in Nairobi's so-called rivers most of which cease to flow

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## Preparation of Larvicidal Cubes.



*Plaster of Paris and Sawdust Cubes drying in sun before being immersed in Laruicide.*



*Cubes after immersion.*



during the dry seasons and thereby give rise to innumerable breeding places for mosquitoes.

Species control has of necessity become a thing of the past in Nairobi now. As development proceeds breeding places decrease for the Anopheline and increase for the Culicine and the latter cannot be ignored simply because it is not a malaria vector—nor do the public allow it to be ignored for, to them, a mosquito is a mosquito and therefore a danger to health whatever its species. The malaria control organisation is therefore more correctly a mosquito control unit and every possible means of combating mosquitoes is used but giving preference to larvicides which will control both *Culex* and Anopheline species. Dieldrin is the substance which so far has given the greatest promise in this respect and has the added asset of being reasonable in price. The form used has been Shell Company's Dioldrex "15" which is miscible in both oil and water and has been found most effective also as a residual spray.

As regards Anopheline species one interesting point, regarding breeding habits, emerged during the year. Collections of Anophe-line larvae from typical *A. Gambiae* breeding places i.e. shallow pools devoid of vegetation, rain pools and cattle footprints, very frequently proved to be *A. Coustani* which previously has only been found in shady pools and heavily overgrown semi-stagnant streams. It appears likely that the decrease in the normal breeding places of these species due to development and intensified river clearance, etc. has forced it into a change change of habits.

The recently formed Nairobi County Council decided during the year that it would be ready to take over in January, 1956, Malaria Control of the area adjacent to Nairobi which has formed a most important part of the City's control area for many years. This area lying to the East of Nairobi City includes large areas of quarries, large and small, which form excellent *A. Gambiae* breeding grounds and the labour lines of these same quarries house the reservoir of the parasite in the ever changing population of labourers, who shuttle between Nairobi and the reserves. The area also includes several housing estates, farms and plantations together with miles of flat land which retains surface water for an incredibly long time during the rainy season.

To assist in the setting up of the County Health Department's malaria control organisation, newly recruited trained staff worked in that area under this departments supervision for the last three months of the year, during which time others to fill the remaining vacancies were trained in readiness. By arrangement with the County Health Department, adult catching stations in the area will be retained and checked by our own experienced staff, during the first few months at least.

#### **MALARIA**

Malaria cases notified as having been contracted in Nairobi numbered 127 an increase of 9 over last years figure but taken in true



perspective in conjunction with population figures showing a slight decrease in rate of attack per 10,000 persons at 6.4.

The attack rate over the past five years is given in the following table:

**Attack Rate per 10,000 population over past five years.**

<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>
50.4	22.55	7.6	6.53	6.4

Of the cases notified 101 were Sub-tertian, 7 Benign tertian and 4 Quartan. The remaining 15 cases were notified on clinical diagnosis only. Distribution was as follows:—

African Estates 63, Eastleigh Asian/African area 8, Central mixed area 4, Hill European/Asian 16, Southern and Western European/African area 8, Industrial area 5, not stated 12.

#### **MALARIA, 1955**

Race	Cases	Attack rate per 10,000	Deaths	Death rate per 10,000
Europeans	25	13.5	1	0.54
Asians	8	1.16	1	0.14
Africans	94	8.5	11	1.00
TOTAL	127	6.4	13	0.65

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#### **Anti-Malaria Drainage**

For the first time in many years all anti-malarial drains and rivers were cleared at least once during the year, and some more troublesome drains twice and three times. It is however extremely difficult to keep the rivers and drains clear, particularly as some types of grass grow at the rate of one inch per day in a dense mat over a distance of several miles. For this reason experiments continued in the use of weedkillers but without much success. Some members of the public objected strongly to the use of hormone weedkillers on river banks and experiments were therefore limited to anti-malaria drains where results were varied but not very encouraging, except in those where little water flowed.

Table 7

#### **Malaria Cases and Adult Gambiae Catches by Months**

*(Residents contracting in Nairobi).*

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Europeans	8	2	5	2	2	—	—	—	—	1	2	3	25
Asians	1	1	2	2	—	—	1	—	—	—	1	—	8
Africans	4	6	10	5	3	9	6	8	6	12	12	13	94
TOTALS	13	9	17	9	5	9	7	8	6	13	15	16	127
Gambiae													
Catches	3	1	3	—	—	2	—	—	—	—	—	—	9

Table 8

**A. gambiae Caught in Fifty-two Collecting Stations**

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Eastern	3	—	2	—	—	1	—	—	—	—	—	—	6
Southern and Western	—	1	1	—	—	1	—	—	—	—	—	—	3
Northern	—	—	—	—	—	—	—	—	—	—	—	—	—
Central	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>TOTALS</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>—</b>	<b>—</b>	<b>2</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>9</b>

**Yellow Fever—Aedes (domestic) Mosquito Control**

Staff difficulties were few and of a minor nature and it was possible to maintain a weekly cycle of inspections during the whole of the year.

A total of 614 additional premises were recorded during the year giving a total number of premises to be inspected each week of 11,787. Total inspections for the year numbered 571,863 producing a total number of collections of larvae of 7,200 and an index of 1.2%.

6,532 warning notices were served on owners or occupiers of premises where mosquito breeding was found to be taking place. This was an increase of 628 over 1954. Prosecutions however decreased from 76 to 45 which would appear to show that more notice was taken of the warnings. Total fines imposed on the 43 persons convicted was Shs. 4,363.20.

The Indices for *Aedes aegypti* showed little significant change from those of last year, being.

- a. To Foci examined 0.004.
- b. To premises inspected 0.013.

The fact that *Aedes aegypti* are found at all, however, shows that vigilance must not be relaxed even for a short time.

The main foci of *Aedes aegypti* were as usual rainwater tanks (22 collections), old motor tyres (20 collections), tins (13 collections), from a total of 77 collections.

The incidence of Anopheline breeding on private premises was happily very much reduced and collections numbered only 4.

123 complaints of mosquito nuisance were investigated and dealt with during the year.

The following table gives details of domestic mosquito larval collections.

(Table of rainfall, malaria cases and vector anopheles catches — Pages 130-131)

Table 9

**Aedes Permanent and Temporary Breeding Foci and Indices**

	No. examined	Larvae species found (times)				Larvae species found (per cent)			
		Aedes aegypti	Anopheles	Culex	All Species	Aedes aegypti %	Anopheles %	Culex %	Species %
<b>PERMANENT FOCI :</b>									
Septic Tanks	148,003	—	—	1,494	1,494	—	—	1.009	1.009
Rain Water Tanks	23,925	22	—	81	103	0.091	—	0.338	0.430
Gullies	363,352	—	—	229	229	—	—	0.067	0.067
Earth Drains	107,041	—	—	378	378	—	—	0.353	0.353
Concrete Drains	611,275	1	—	446	447	0.0001	—	0.073	0.073
Soakage Pits	39,664	—	—	1,439	1,439	—	—	3.627	3.627
Bath Pits and Sunken Drums	53,999	—	—	1,031	1,031	—	—	1.909	1.909
Water Meters	373	1	—	76	77	0.268	—	20.375	20.643
<b>Total Permanent Foci</b>	<b>1,347,632</b>	<b>24</b>	<b>—</b>	<b>5,165</b>	<b>5,189</b>	<b>0.0017</b>	<b>—</b>	<b>0.375</b>	<b>0.377</b>
<b>Temporary Foci</b>	<b>466,714</b>	<b>53</b>	<b>4</b>	<b>1,954</b>	<b>2,011</b>	<b>0.011</b>	<b>0.0008</b>	<b>0.418</b>	<b>0.430</b>
<b>GRAND TOTAL</b>	<b>1,814,346</b>	<b>77</b>	<b>4</b>	<b>7,119</b>	<b>7,200</b>	<b>0.004</b>	<b>0.0002</b>	<b>0.392</b>	<b>0.396</b>

## SECTION 6

### RODENT AND VERMIN CONTROL

#### RODENT CONTROL

A gradual building up of staff and training has been the main feature of this year, and in this respect the Department was fortunate in retaining a nucleus of its trained African personnel who were able to take the new recruits in hand. Several employees who had been detained and had later proved amenable to rehabilitation were re-employed.

Training is a long process with the type of man who will undertake rat-catching — most Africans who have received some education will not do this work, therefore it is from the ranks of the completely illiterate that rat-catchers are drawn. Not all these people, even though willing, attain the art of catching by hand, which demands quickness of hand and eye, and an acquired knowledge of the habits of rats in every circumstance.

Small increases of personnel are acquired each year, usually after a hard battle with the “holders of the purse” but with the growth of the City both in density and area, at its present rate and in view of the almost complete lack of co-operation from the public it becomes imperative that a sufficient force of trained men and intelligent overseers with adequate equipment and transport must be available if the rodent population is to be kept within bounds.

**Plague.** No cases of plague were reported in the City during the year.

**Rat Examination.** 5,499 rats from daily catches and 5 “found dead” were examined for P. Pesties with negative results.

**Rodent Destruction.** The following table shows the total result of the year’s work:—

Table 10

Total Kill		
Rattus rattus	...	2,582
Mastomys coucha panya	...	1,544
Arvicanthis abyssinicus	...	6,736
Otomys angoniensis	...	682
Mice (all species )	...	3,977
Others	...	248
Total	...	15,769
Estimated kill, gas and poison	...	5,611
All species (Railway admin.)	...	4,758
Total	...	41,907



During the year permanent baiting points were set up in two of the African Estates and Sorex and Zinc Phosphide used with considerable success. The problem of finding suitable bait containers for use in African Estates was solved when a local firm donated a lorry load of broken lengths of asbestos soil piping.

A bait container for use either in or out doors was devised and has proved popular with members of the farming community and with other health organisations. Three of these containers can be made from one empty 4 gallon Kerosene tin of which plenty are usually available everywhere.

The accompanying photographs illustrate this container and its suitability in protecting baits from the elements.

Trapping in the commercial area as a check on the infestation rate and as a means of finding any black spots continued and results are shown in the following table. It will be noted that 22.3% of all rooms trapped were infested—not a very happy picture, although numbers were not high.

To combat this, notices to rat proof were served on the proprietors of food premises who would not carry out our requirements when given verbally. Approximately 10 premises were rendered as rat proof as possible with the co-operation of the owners.

However, to rat proof is not enough without continuous vigilance, and unfortunately many shopkeepers prefer to hide the fact that their premises are infested until the fact becomes too obvious.

Hand-catching remains one of the finest and most speedy means of extermination and in many cases following rat proofing small shops can be cleared completely of rats in one day, which is infinitely better than several days or even weeks of trapping or poisoning. It is pleasing to note from the following table that the number of rats caught inside premises by this means has almost doubled that of last year.

Table 11

### Hand Catching in Buildings

	Commercial and Industrial Areas	Kariokor and Ziwani	Shauri-Moyo	Kaloleni	Totals
Rattus rattus	... 273	—	—	—	273
Mice	... 433	—	5	23	461
Others	... 13	—	—	—	14
Totals	... 719	—	5	23	747

### HANDCATCHING IN OPEN AREAS

This is most necessary because of the presence of large numbers of Mastomys, the indigenous Hut rat, which is known to carry the Vector flea and will itself infest houses where there are no Rattus.

The drill for handcatching out of doors is as follows. The rat gang drives forward through open ground and catches as many rats as possible as they make for their burrows. Burrows are noted and

later dug out, as they are seldom very deep.

Deep burrows, usually old termite nests are visited later by the gassing team. It will be noted that this method of catching in open areas yielded 11,732 bodies which includes no less than 851 *Rattus rattus*.

Table 12

	Kariakor and Ziwani	Pumwani and Gorofani	Shauri-Moyo	Kaloleni	Bahati	Ofafa	Mbotela	Makadara	Abattoir	Sawmp	Ngara and Pangani	Other Areas	Totals
<i>Rattus rattus</i>	2	39	59	78	75	29	16	—	44	252	64	193	851
<i>Mastomys coucha panya</i>	58	116	168	246	55	24	48	19	11	479	83	222	1,529
<i>Arvicanthis abyssinicus</i>	85	297	672	1,380	628	74	204	132	53	688	826	1,645	6,684
<i>Otomys angoniensis</i>	7	3	51	120	93	33	4	6	3	84	12	266	682
Mice	21	28	108	105	45	4	39	23	45	746	280	333	1,777
Others	1	10	67	23	4	1	2	—	1	25	26	49	209
Totals	174	493	1,125	1,952	900	165	313	180	157	2,274	1,291	2,708	11,732

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The old cat and rat argument is looming rather largely on the horizon in Nairobi now. So much so that squads of cats are becoming a considerable nuisance and no one appears to know of a satisfactory and humane solution. It is a problem which cannot be left untackled for long now, and it has become necessary for the Department of definitely discourage the use of cats for roden control—which is a pity, as when controlled they can be useful for this purpose.

Anti-Rodent work in the African Estates is always rather difficult as hoardes of children make off with traps and bait containers, and food refuse is deposited anywhere and everywhere. The situation is made even worse in some of the new estates by inefficient surface water drains and inadequate cleansing, providing ample food and harbourage.

The older estate Shauri Moyo is always a source of large quantities of mice which live in the asphalt floors and are provided with a goodly supply of food by carelessness of the occupants regarding preparation and storage of food, and disposal of waste.

The Rodent Sections stall at our Help Yourself to Health Exhibition in November proved a great attraction and was considered well worth the trouble involved.

Opportunity was taken during the exhibition to distribute leaflets on rat and vermin control, amongst other things.

Table 13

### Trapping in Native Locations

Rooms Trapped	Houses Trapped	Rooms or Houses infested	Index	Trapping Days	Rattus	Mice	Others	Totals		
Kariokor and Ziwani		1,503	—	35	2.32	64	17	29	6	52
Pumwani and Gorofani		777	890	207	12.4	144	188	336	3	527
Starehe		555	—	27	4.85	24	1	23	—	24
Shauri-Moyo		—	340	56	1.64	48	9	122	—	131
Kaloleni		810	—	163	2.03	60	50	315	5	370
Bahati		2,145	—	55	2.56	176	48	62	3	113
Ofaa		82	—	—	—	8	—	—	—	—
Mbotela		935	—	146	1.56	64	44	202	—	246
Makadara		717	—	45	6.27	80	4	42	—	46
Totals		7,524	1,230	736		668	361	1,131	17	1,509

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Table 14

### Private and Special Trapping and Handcatching

Rattus rattus	...	438
Mastomys	...	15
Arvicanthis	...	52
Otomys	...	—
Mice	...	165
Others	...	—
Totals	...	<u>670</u>

Table 15

### Trapping — Commercial and Industrial Areas

Rooms Trapped	Rooms Infested	Index	Trapping Days	Rattus rattus	Mice	Others	Totals
1,427	327	2.29	204	659	443	9	1,111





VERMIN CONTROL

Demand for the services of this section in the destruction of vermin of all types continued, mainly in respect of infestations of bugs. Help was also given in the control of Termites, Bats, Snakes and Borer beetles. The table below gives more detail. In addition to this the section carried out large scale Anti-Fly Spraying Operations in the vicinity of two schools in which Poliomyelitis cases had occurred.

Insecticides prepared by this section were supplied in bulk to Government departments, schools, sewage works, the Cleansing Department and in very large quantities to the Railways and Harbours Administration for the residual spray treatment of passenger coaches etc.

Sales in small quantities to the general public totalled 13,000 pints. Revenue from Vermin work and sales totalled over £2,000.

Table 16

Disinfestations

	Bed Bugs	Cockroaches	Fleas	Ants	Flies	Bats	Ticks	Mites	Mosquitoes	Termites	Snakes	Borer Beetles	Totals
Rooms	4,162	122	304	58		6	6	3	8				4,649
Open					32					24	4	2	45



## SANITARY ADMINISTRATION

*"A healthy body is the tabernacle,  
A sickly one the prison of the soul."*

BACON.

One does not need to be a trained investigator to satisfy oneself that a large part of the population of Nairobi suffers from this imprisonment of the soul. The deficiencies of sanitation is only one of the evils which has to be fought. But, we have to face the unpleasant fact that even in this so-called enlightened age there are many people, of all races, whose upbringing has been restricted by a caste system whose unfortunate traditions decree that many chores are beneath the dignity of the superior classes to perform. This attitude, in many cases, appears to be behind the untidy and insanitary conditions which exist in varying degrees throughout the City.

If, on occasion, people could bring themselves to drop their masks of dignity and to do, themselves, what they all too often leave to unsupervised servants, Nairobi would be a much cleaner City.

Many of the nuisances met with day by day are of a private rather than of a public character but there seems to be an ingrained belief that because rates have been paid the Cleansing Department should be compelled, figuratively, to wash doorsteps. Streets and lanes are depots for refuse and many people see nothing wrong in using them for this purpose.

A lack of sufficient basic education in the elements of hygiene and the social obligations of living in a City is partly to blame; there is perhaps a blind emphasis on training in subjects which will lead to individual professional glory rather than to community pride. It leads one to believe that there is a definite lack of balance when one sees members of noble callings acting in ways which one might excuse in Africans whose whole life had been spent in the bush. A brass plate on the door and no cuspidor.

The bad habits which are exhibited daily could result in the perpetrators appearing in the courts but the number of cases which occur would swamp the already overworked medical and legal departments. In addition other matters of a more serious nature would have to be left in abeyance. One possible method of dealing with dumpers, spitters and others might be to fine them on the spot at a fixed rate with the alternative of appearing before a magistrate.

The root cause undoubtedly lies in the unbringing of the citizen. There lies little hope for the future of infants who are encouraged to defaecate into open drains and who are taught thereafter to expect a sweeper of the "lower orders" to deal with the faeces. To them, personal effort and hygiene are not associated with each other. The

practice of whole groups of families living together in rooms and houses intended for only one family does not assist in maintaining clean, healthy conditions for, despite the old cliché that many hands make light work, the reverse happens in that many bodies make things more confounded.

\* \* \* \*

A problem which causes the department much concern illustrates well the difficulties and dangers which confront sanitary authorities in a society such as this. It is the problem of the ritual slaughter of goats. Religious bodies have argued that these goats must be slaughtered within the family precincts, namely, in the back yards and garden patches. This, as the City grew, caused considerable nuisance and became a public health menace, till the time came when secular considerations outbalanced religious scruples. Efforts were made to prevent every back yard from becoming a slaughterhouse without conflicting with religious requirements. The opposition to the department's suggestions was very strong and, it was felt, somewhat indifferent to the feelings of other religious bodies and the principles of hygiene. An unhappy compromise was reached — a compromise which should be regarded only as a temporary one. Many other similar problems exist in the City — problems which could readily be solved by a general desire for healthy living, by goodwill, by commonsense and by a less rigid adherence to customs which science and progress have shown to be fallacious.

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\* \* \* \*

Overcrowding is still rife and the civic morals of many landlords very questionable. Accommodation is scarce but grasping landlords who encourage overcrowding and who take advantage of the misfortunes of their less wealthy brethren by extracting ridiculously high rents for squalid quarters, do not ease the situation. Few dwellings comparatively are being erected, most of the new construction being concentrated in the building of offices. When these offices cannot be let the landlords clamour to use the rooms as dwellings, which do not, of course have the necessary facilities. In their pursuit of money many of these people evict their African servants from their quarters and let these quarters. The Africans, meanwhile are relegated to the most makeshift and often unbelievably inadequate living quarters. Throughout the year legal action was taken against such people who thus attempted to take advantage of folk less fortunate and, because they had no money, much less powerful, than themselves.

\* \* \* \*

Once more it is urged that serious consideration should be given to the introduction of legislation compelling employers to provide housing for their labour. As it stands, the law permits the payment, to Africans, of a sum of money in lieu of housing. This merely

promotes the overcrowding of such accommodation as already exists and assists the greedy and socially unconscious to escape their obligations.

There are others who permit Africans, for a fee to build shacks on their land. These places develop into small housing estates, with no water (except from heavily polluted rivers), no sanitary arrangements — indeed, with not the merest trace of the basic human requirements for living except four walls of dubious construction and an even more dubious roof. No defence on moral grounds can be prepared on behalf of such landlords. They are condoning and promoting a social evil for financial gain. But employers and the law which permits the payment of this allowance in lieu of housing are equally to blame. All three should be reviewed and with haste for herein lies the spark which produces the flame of rebellion.

\* \* \* \*

Many other problems exist in Nairobi, many may be problems exclusive to Nairobi. Should not, for example, more attention be given to the building of tenant housing without boys quarters to meet the requirements of the “down to earth” who are prepared to do their own work entirely, realising that servants and, perhaps, other refinements are now beyond their financial worth? Should not more consideration be given to bringing many Crown properties up to standards which meet with by-law requirements? Should not more consideration be given to the amenity requirements of the individual — or, at least to locational groups of people — rather than to the publicity-beautifying of the town, the “keep off the grass” highways and such? There is only one public park provided by the City. Do most of the Africans in the locations prefer to have bouganvillaeas rather than their own little vegetable shamba round their house? Are the pathetic — or is it heroic? — efforts of the Bahati citizens to cultivate their patches completely unnoticed? How much of the African locations has been beautified by the local authority? How much remains untouched and untouchable — by some? How much more does a man prefer to tend his own little bit of land round his own house than to have it tended by others — if it is tended by others.

\* \* \* \*

The City, young, vital, expanding, despite recent setbacks, with astonishing rapidity presents multitudinous problems and difficulties. It may lead on occasion to despair, but rather let it be regarded as a challenge which requires courage in decisions, foresight and vision, wisdom and goodwill, and the most meticulous attention and thought to the details of policy. Slovenly and illogical thought will be fatal.



## Summary of Works Performed

### Nuisances :

#### Inspections made to :—

Dwelling Houses	...	...	...	...	4,632
Laundries	...	...	...	...	124
Offensive Trades	...	...	...	...	45
Stables and Cattle Sheds	...	...	...	...	41
Trade Premises and Offices	...	...	...	...	1,562
Public Buildings	...	...	...	...	233
Buildings (other)	...	...	...	...	1,585
Open Spaces, Streets, etc.	...	...	...	...	2,602
Swimming Baths	...	...	...	...	72
Barbers	...	...	...	...	171
Camps	...	...	...	...	114
Second Hand Clothing Dealers	...	...	...	...	32
Miscellaneous	...	...	...	...	1,357
Total					12,570

Complaints investigated ... .. 711

*For inspections of food premises see separate table.*

### Defects Remedied :

Latrines	...	...	...	...	957
Drainage	...	...	...	...	726
Refuse Accumulations	...	...	...	...	570
Unauthorised Buildings	...	...	...	...	59
Dirty Premises	...	...	...	...	484
Food Protection	...	...	...	...	52
Unfit dwellings including huts	...	...	...	...	34
Defective Roofs	...	...	...	...	30
Mosquito Breeding	...	...	...	...	57
Premises rat infested	...	...	...	...	67
Yards unpaved	...	...	...	...	9
Miscellaneous	...	...	...	...	282
					3,327

### Inspections of Premises subject to special control :

Aerated water factories	...	...	...	...	215
Bakeries	...	...	...	...	233
Butchers and Fishmongers	...	...	...	...	648
Dairies and Milkshops	...	...	...	...	487
Eating Houses	...	...	...	...	937
Food Factories	...	...	...	...	240
Groceries and Provisions	...	...	...	...	1,954
Restaurants and Tea Rooms	...	...	...	...	424
Hotels and Bars.	..	...	...	...	460
Market (stalls)	...	...	...	...	339
Vegetable Dealers	...	...	...	...	338
					6,275



**Licences :**

Trade premises inspected	...	...	...	1,970
Taxi cab inspections	...	...	...	187
Food Carts: Milk, meat, bread, etc.	...	...	...	127

**Erection and Alteration of Buildings :**

*(Public Health Department supervision only).*

Plans scrutinized (including sub-divisions)	622
No. of premises connected to sewers	204
No. of new water closets discharging into sewers	649
No. of new septic tanks	10
No. of conversions	59

**Unauthorised Buildings :**

Inspections made	74
Notices served	22
Reference to other departments	71
Structures demolished (P.H.D.)	71

**Notices Served :**

Intimation (Verbal)	3,572
Intimation (Written)	543
Public Health Ordinance	576
By-laws	475
Others	64

**Prosecutions :**

Cases

Public Health Ordinance	55
By-laws	150
Milk and Dairies Regulations	2
Others	1
Withdrawn or Discharged	38
Demolition Orders	10

Total Fines Shs. 18,619/- with costs of Shs. 1,442/-.

**Liquor Licence Applications :**

Non-Spirituos	167
Wine Merchants and Grocers	82
General Retail	10
Wholesale	12
Restaurants and Hotels	12
Clubs	4
Others	5

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# **City Mortuary :**

The number of bodies received into the City Mortuary were :—

African	...	...	...	...	...	263
Asian	...	...	...	...	...	42
European	...	...	...	...	...	40
						<hr/> 345 <hr/>

# **Bodies were removed from :**

		1955	1954
King George VIth Hospital	...	321	489
Pumwani Maternity Hospital	...	200	164
City Mortuary	... ..	123	194
Prison	... ..	46	362
Mathari Mental Hospital	...	62	47
Infectious Diseases Hospital	...	53	38
General Dispensary	... ..	1	3
		<hr/> 806	<hr/> 1,297 <hr/>

# **Unsound Food Condemned :**

lbs.

Baby food	...	...	...	...	...	830
Biscuits	...	...	...	...	...	208
Cereals	...	...	...	...	...	800
Cheese	...	...	...	...	...	3,561
Fat emulsion	...	...	...	...	...	1,064
Fish, fresh	...	...	...	...	...	3,858
Fish, preserved	...	...	...	...	...	1,275
Fruit	...	...	...	...	...	975
Fruit, dried	...	...	...	...	...	2,500
Fruit pulp	...	...	...	...	...	22,400
Groceries	...	...	...	...	...	4,709
Meat	...	...	...	...	...	63
Rice	...	...	...	...	...	1,760
Salt	...	...	...	...	...	550
Sweets and Chocolate	...	...	...	...	...	1,815
Vegetables	...	...	...	...	...	1,620
Eggs, No.:	...	...	...	...	...	360
Poultry, No:	...	...	...	...	...	507
Tomato Sauce, Bts.	...	...	...	...	...	43
Wines, beers, Bts.	...	...	...	...	...	105

## SECTION 8

### FOOD INSPECTION

#### FOOD PREPARATION

During the year all European restaurants and tea rooms were supplied with detailed lists of structural and hygienic requirements which would be used in 1956, in addition to the existing law, as a basis for the issue of grading certificates, which would be classified A, B, C and D. Although there is no legal power to enforce the display of these grading certificates it is hoped that public interest will encourage managements to endeavour to obtain the highest grade. The issue of annual licences is of course still based on existing law but it is hoped within four years to introduce legislation which will incorporate all the requirements for an A grade licence, after which time no premises will be licensed unless they qualify in every respect for an A grade licence.

#### MILK

The problem of adulteration of milk by African roundsmen still remains. However, the introduction of a new non-returnable, pilfer-proof milk pack by one of the large dairy firms, which it is hoped to have on the market by mid 1956 should go a considerable way towards solving the problem. Once again of course, the results will depend largely on the reactions of a consumer public, who for many years have been accustomed to receiving milk in the standard glass bottle.

During the year plans have been approved for the transfer of two dairies to completely new premises which will be fitted with modern automatic equipment. Reference to the table relating to bottle rinses shows that the bacteriological standards were unsatisfactory in more than 50% of the samples. This is in direct proportion to the number of dairies equipped with sterilising and washing equipment requiring constant supervision and manual operation. At present most of those dairies having this type of equipment are reluctant to invest capital in modern automatic plant until they know the reaction of the public to the new type of milk pack mentioned previously.

A brucellosis survey was carried out during the year on milk supplied to Nairobi. It was found to be more prevalent in certain zones than others, but the percentage of affected milk was found to be less than might have been expected. Details of results were supplied to the Veterinary Department, which is now carrying out a Colony wide survey.

MINERAL WATER FACTORIES

The second of the two mineral factories on which construction began in 1954 was completed and has, since opening, a 100% satisfactory record on bacteriological examination of samples. One other factory is now under construction and should be completed early in 1956.

GOATS

One of the customs which causes considerable concern is that of certain sections of the Asian population who slaughter goats for consumption at their homes in celebration of feasts, births, deaths, etc. The dangers of consuming uninspected meat are generally too well known to require comment, but most of this section of the population is unappreciative and unheeding of these dangers and, consequently, the task of impressing upon them the dangers of such a practice is to say the least, formidable. Education and propaganda seem to be the only methods by which any progress will be made, and this inevitably will be a very slow process.

Table 17

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1. Resazurin Tests

Month				Category			Total
				A	B	C	
				4 — 6	1 — 3½	0 — ½	
January	...	...	...	257	36	54	347
February	...	..	...	192	17	44	253
March	...	...	..	221	12	21	254
April	...	...	...	173	17	25	215
May	...	...	...	252	24	18	294
June	..	...	...	198	21	4	223
July	...	...	...	191	4	1	196
August	...	...	...	191	18	3	212
September	...	...	...	211	20	12	243
October	...	...	...	198	24	26	248
November	...	...	...	219	25	23	267
December	...	...	...	185	20	29	234
TOTAL	...	...	...	2,448	238	260	2,986

2. Phosphatase Tests

Efficiently Pasteurised		Inefficiently Pasteurised	Not Pasteurised	Total
4		—	—	4



### 3. Estimation of Fat and Non Fatty Solids

			Satisfactory	Unsatisfactory	Total
Milk	...	...	599	90	689
Cream	...	...	14	20	34
TOTAL	...		613	110	723

### Samples Submitted by Food Inspector to Government Chemists

Article			Satisfactory	Unsatisfactory	Total
Baking Powder	...	...	1	—	1
Butter	...	...	4	1	5
Coffee	...	...	1	1	2
Cornflour	...	...	1	—	1
Currants	...	...	1	—	1
Dried milk	...	...	1	—	1
Flour	...	...	2	—	2
Fruit concentrate	...	...	2	—	2
Fruit squashes	...	...	13	1	17
Ghee	...	...	2	—	2
Ground rice	...	...	2	—	2
Honey	...	...	2	—	2
Jam	...	...	1	—	1
Jelly	...	...	1	—	1
Lard	...	...	1	—	1
Margarine	...	...	1	1	2
Paprika	...	...	1	—	1
Patent Baby Food	...	...	—	4	4
Peaflour	...	...	1	—	1
Pepper	...	...	2	—	2
Posho	...	...	3	—	3
Salad Oil	...	...	2	—	2
Salt	...	...	1	—	1
Tea	...	...	—	1	1
Tinned Beans	...	...	1	—	1
Tinned Cream	...	...	1	—	1
Tinned Milk	...	...	1	—	1
Vinegar	...	...	1	2	3
Water	...	...	1	—	1
			54	11	65

### Samples Submitted by Food Inspector to Government Bacteriologist

Article			Satisfactory	Unsatisfactory	Total
Aerated waters	...	...	207	16	223
Bottle rinses (Dairies)	...		32	43	75
Food	...	...	3	—	3
Water	...	...	184	8	192
			426	67	493

## Legal Proceedings instituted in connection with Food Offences

Nature of Offence		Prosecutions	Convic- tions	Penalties	Costs
<b>Public Health Ordinance</b>					
Section 131.	Failing to protect foodstuffs against contamination	2	—	1 Acquitted 1 Pending	
<b>Milk and Dairies Regulations.</b>					
Section 40.	Purveying adulterated milk	1	—	Acquitted	
Section 4.	Operating dairy without license	1	1	50/-	
<b>Milk and Dairies By-laws</b>					
Section 10.	Selling cream with fat below standard	1	—	Acquitted	
<b>Nairobi Municipality (General) By-laws</b>					
Section 15.	Using unlicensed premises as restaurant	2	2	700/-	24/-
Section 109.	Dirty Native Eating House	1	—	Acquitted	
Section 119.	Delivering unwrapped bread	2	2	400/-	20/-
Section 156.	Dirty butchers shop	1	1	40/-	
Section 283.	Using unlicensed vehicles for conveyance of meat	5	5	200/-	42/-

## EXTRACTS FROM THE ANNUAL REPORT OF THE CITY ENGINEER

### SEWERAGE AND SEWAGE DISPOSAL

**General.** During 1955 the majority of the sewerage constructed has been once again in the African housing areas and the industrial area.

As forecast in the 1954 report, there has been an extremely large drop in the mileage constructed during the year and a further decline is anticipated for 1956.

Throughout the year the section has again been completely without senior staff and the full effect of this will be felt in 1956 when sewer construction will almost cease.

The foul sewerage of Eastleigh, Pangani and Parklands/Westlands has been given to consultants to carry out but it is improbable that the schemes can be started for about one year.

In addition the surface water sewerage of the northern portion of Eastleigh has been handed to consultants.

The £325,000 extensions to the Sewage Disposal Works are proceeding but are behind schedule.

**New Construction.** 35,960 lin. feet of foul sewers were constructed during the year and the table below gives comparative annual statistics:—

1952	1953	1954	1955
32,724 lin. ft.	58,884 lin. ft.	80,376 lin. ft.	35,960 lin. ft.
Further details are:—			
Constructed by contract	...	...	33,379 lin. feet
Constructed by direct labour	...	...	2,581 lin. feet
Foul sewers existing at the end of 1954	...	...	91.03 miles
Foul sewers constructed during 1955	...	...	6.81 miles
Foul sewers at the end of 1955			97.84 miles

**Sewage Disposal Works.** The works have once again continued to operate under a heavy overload resulting in the discharge of a poor quality effluent. At the end of the year extra humus tanks had been completed giving some small measure of relief.

By the time the existing extensions are completed the flow to the works will be once again fully up to the new capacity and a new works further down the valley is under consideration.

**Maintenance.** The problems of maintenance continue to increase and 445 sewer blockages took place during the year compared with 264 in 1954. The principal cause of trouble is the general abuse to

which the system is subjected and the leaking condition of many of the older sewers.

Were it possible to carry out regular engineering inspection and preventive maintenance I would anticipate that blockages could be reduced to perhaps 10% of their present figure.

## **WATER SUPPLY**

### **Sources of Supply :**

- (a) Kikuyu Springs: Continue to give a daily supply of just over one million gallons of water of excellent quality.
- (b) Ruiru Dam: Having been overflowing for the latter half of 1954, commenced the year with 620,000,000 gallons, and has not been full since. The April rains provided an increase of only 72,000,000 gallons and at the end of December the water stored had fallen to 221,000,000 when the level was 23 feet below spillway.
- (c) Nairobi Dam: Contained an average of 300,000,000 gallons of water which was kept available for cases of emergency and was only brought into commission for a few days during December. Some 230,000 gallons per day can be pumped into the City supply as required.

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### **Rainfall.**

1955 was a poor year for rain and was well below average. That which did fall was well distributed and, while this did not assist in filling the reservoirs, it had the effect of reducing the heavy demands which are normal in dry weather.

### **Pipelines**

Five main trunk lines bring in Nairobi's water supply. Three of these, a 16", a 12" and a 9" diameter, bring in the Ruiru water and 9" and a 7" bring in the Kikuyu supply.

As part of the Chania-Sasumua Scheme, work was in hand simultaneously on the 16"/12" Sasumua/Ruiru section and the 24" Ruiru/Kabete section of the new trunk main from South Kinangop. Both these were nearing completion by the end of the year and will be ready to deliver water early in 1956.

### **Quality of Water.**

Apart from slight seasonal discolouration, the quality of the water delivered as indicated by sampling and bacteriological analyses has been fair throughout the year. Of the 183 samples taken for bacteriological examination, none were reported "Unsatisfactory" or "Suspicious" but 7 fell below the desirable designation of "Highly Satisfactory". This matter is receiving further attention.



## **Delivery and Consumption.**

The total quantity of water treated and delivered to Council's mains during 1955 was 1,960 million gallons, or an average of 5.38 millions a day which is the highest figure so far recorded.

No population census was made in 1955 and the population served has been extrapolated from previous years and estimated at 188,000 persons. On this basis the average consumption per head of population per day for all purposes is 28.6 gallons.

## **Supply and Demand.**

No additional water was available to Nairobi during the year but the usual development of the City continued; so that, while the trunk mains were running light to begin with, they were taxed to the full by the end of the year. As mentioned above the dull weather counteracted the lack of rain and the maximum dry weather demand was not so great as has been experienced in other years. Considerable concern was felt over the low level of the Ruiru Dam towards the end of the year and the delays in obtaining additional water from Sasumua, however, some unseasonal rain broke at the end of December and the outlook for 1956 is now much improved.

## **New Works:**

- (a) Chania-Sasumua Scheme: Work on the Dam site is nearing completion and impounding was commenced in November. Work on the 16"/12" Sasumua/Ruiru pipeline which was abandoned because of Emergency operations was recommenced and a new contract was let for the 24" Ruiru/Kabete pipeline. Both these were well on towards completion by the end of the year and are expected to deliver water by March 1956.
- (b) The new 6,000,000 gallon reservoir at Kabete was completed and filled for testing early in 1955.
- (c) New Mains: A change of mainlaying contractor took place in the year with a hiatus of 3 months, nevertheless some 12½ miles of new mains were laid ranging from 18" to 3" diameter. This figure is approximately two thirds of that laid in the previous year.

## **African Estates Section.**

Progress during the year has not been satisfactory. The reasons are shortage of staff, time taken in investigations into the work being carried out on African housing contracts, and the fact that, due to policy decisions, only a very small part of the work planned has materialised. Building prices continued to rise, and it is not possible to conform to estimates prepared months earlier.

## Council Built Housing.

- (i) Mbotela Estate (Doonholm Triangle): Single storey, stone and tile buildings. Three contracts were commenced in 1953, and all the buildings had been occupied by June 1954.
- (ii) Ofafa Estate (Doonholm Neighbourhood): Single storey, stone and tile buildings. Three contracts were commenced in 1954, and by January 1955 all were approximately 60% complete.

## Employer Built Housing.

- (i) East of Shauri Moyo: 4 employers completed housing at this site and provided accommodation for 685 persons in permanent single storey buildings.
- (ii) Doonholm Road: 22 employers completed housing at this site and provided accommodation for 1,249 persons in permanent single and double storey buildings.
- (iii) Makadara: 15 employers completed housing at this site and provided accommodation for 565 persons in permanent single storey buildings.

## African Built Housing.

Bahati ... 22 stone houses completed.

Makadara ... 13 mud and wattle houses completed.

2 stone houses completed.

5 stone shops completed.

Total housing accommodation provided for 360 persons.

### Summary of Persons Housed in 1955.

- |     |   |     |     |     |     |     |       |       |
|-----|---|-----|-----|-----|-----|-----|-------|-------|
| (a) | Council Built                           |     |     |     |     |     |       |       |
|     | Ofafa Estate — (Doonholm Neighbourhood) | ... |     |     |     |     | 1,722 |       |
|     |   |     |     |     |     |     |       | <hr/> |
| (b) | Employer built                          |     |     |     |     |     |       |       |
|     | East of Shauri Moyo                     | ... | ... | ... | ... | ... | 685   |       |
|     | Doonholm Road                           | ... | ... | ... | ... | ... | 1,249 |       |
|     | Makadara                                | ... | ... | ... | ... | ... | 565   |       |
|     |   |     |     |     |     |     |       | <hr/> |
|     |   |     |     |     |     |     | 2,499 |       |
|     |   |     |     |     |     |     |       | <hr/> |
| (c) | African built.                          |     |     |     |     |     |       |       |
|     | Bahati and Makadara                     | ... | ... | ... | ... | ... | 360   |       |
|     |   |     |     |     |     |     |       | <hr/> |
|     | Total                                   |     |     |     |     | ... | 4,581 |       |

## Public Cleansing.

This service was taken over in 1954 and has been functioning under difficulties.

Proposals have been submitted for improvements, the majority of which were accepted. Unfortunately due to extreme pressure of other work resulting primarily from staff inadequacy it has not been possible to implement these improvements.

The following is a table of operations carried out during the year. The figures should be regarded as approximate only.

**(a) Refuse Removal.**

Total daily collections	...	...	...	...	tons	54,200
Special removals — 3 ton lorries	...	...	...	...	loads	337
Scavenging and junk — 3 ton lorries	...	...	...	...	loads	4,115
Outside lorries. Approx. 3 ton lorries	...	...	...	...	loads	1,369
Derelict vehicle bodies cleared	...	...	...	...	number	204
Street washer	...	...	...	...	loads	1,893

**(b) Exhauster Removals.**

Conservancy tanks	...	...	...	...	loads	13,337
Waste water pits	...	...	...	...	loads	14,278
Septic tanks	...	...	...	...	loads	1,407

**(c) Bucket Service.**

Conservancy lorries	...	...	...	...	loads	2,670
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**(d) Sale of compost.**

Deliveries commenced	27.7.55	...	...	...	tons	736
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**(e) Choke clearing.**

Locations	...	...	...	...	number	660
Other areas	...	...	...	...	number	497

**(f) Drain clearing.**

With effect from July 1955	...	...	...	...	man days	1,950
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**(g) Grass cutting.**

Including private plot clearing	...	...	...	...	man days	2,106
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## SECTION 10

### EUROPEAN CHILD WELFARE

The year just ended has been happily noteworthy for a marked improvement in the state of public security. With the sense of lessened need for vigilance and caution, the thoughts of Nairobi mothers turned from "Is my child protected from the threat of violence?" to "Is my child protected from the threat of ill-health?" and this trend is reflected in an almost startling increase in the use of child welfare services. In comparison with 1954, total attendance at the clinics rose by 69% and attendance for protective inoculations by 110%. This is a happy indication that in caring for to-morrow's citizens the Nairobi public is fully aware of the benefits of positive health. Conversely it must be realised that these figures represent a tremendous additional burden on the available clinic facilities, in buildings and above all in staff; they are extended to their uttermost and can stretch no further—an expansion in one direction must now mean a contraction in another.

#### STAFF

Dr. Philippa Gaffikin continued as Medical Officer throughout the year and exercised general supervision over the European Child Welfare service including the two Day Nurseries. Mrs. E. M. Sullivan carried out the duties of Health Visitor throughout the year.

#### BUILDINGS

**Parklands Clinic.** In December work was begun on the new clinic which is to be built as a separate unit from the nursery and which, when completed will relieve the nursery of the inconvenience so long created, by having both units in the same building.

Construction of the new clinic is part of a larger building programme, designed to enlarge the nursery accommodation and involving considerable alteration and reconstruction. Resultant disorganisation made it impossible to hold clinic sessions in the nursery building, and from the beginning of November these were conducted in the Ngara Clinic of the Asian Maternity and Child Welfare Department.

**Woodley Clinic.** Accommodation for this clinic is incorporated in the building of Woodley Day Nursery, and sessions were held there throughout the year. The rise in attendance occasioned some overcrowding of the waiting room, but it did not reach a level that would make plans for expansion a matter of urgency.

#### CLINIC ACTIVITIES

The normal routine of clinic sessions was maintained throughout the year — two afternoons a week at each of the two clinics, with



the Medical Officer present for one session at each. The altered timing of Woodley Clinic, initiated in the latter part of 1954, proved its worth in the marked increase in attendances. The Monday session, at which the Medical Officer is present, now runs from 3 to 5 p.m., and the later time of closing was clearly popular. The later time of opening was another matter, and in fact became one more of those customs "more honoured in the breach" — the effective hours could be more truthfully put down as 1.40 — 5.20 p.m.

321 new infant registrations were recorded during the year, compared with 213 in 1954. As the recorded resident births were 394, it can be seen that the clinic services were genuinely appreciated by mothers with young infants: 81% of the babies born to families residing in the city area became clinic attenders. Continued supervision of the older children — an essential corollary of infant welfare — was even more evidently a valued service, for new registrations in the 1—6 year age group rose from 142 in 1954 to 419 in 1955.

The average level of child health remained good throughout the year and there were no major epidemics, although the usual scattered outbreaks of exanthemata occurred among toddlers including those attending the day nurseries. Infant well-being was really magnificent — an American visitor with wide welfare experience in New York State attended a Woodley session and commented afterwards "I've never seen such babies, each one lovelier than the last." Conspicuous even on this standard are the newcomers in families where clinic attendance is a habit already established for these fortunate infants fall into the routine of better baby-raising from the word "go" and never look back.

A significant trend noticeable during the year was an increase in breast-feeding and particularly in prolonged breast-feeding. A good start in hospital was reinforced by clinic encouragement coupled with the advice to start solids early, to give complementary feeds where test-feeding revealed a limited breast supply, and above all not to worry. Apparently the happy result ensues that the mother ceases to be nagged by anxiety as to whether the infant is getting enough, baby has a full tummy and goes to sleep, both parties relax — and the milk supply promptly increases.

An interesting feature of the year's work was the Public Health Exhibition, held in the Memorial Hall for a week during November. The theme was "Help Yourself to Health" and the European Child Welfare stand demonstrated how this might be done with the aid of clinic services.

In addition to the routine health supervision of children in the two day nurseries, the Medical Officer carried out medical examinations of the children at intervals through the year, and here also the health level was very satisfactory.

At the end of September an event occurred which brought sorrow to a very great number of Nairobi's mothers — the sudden death of our former Health Visitor, Mrs. Patricia Graham, at the early age of 38. Sister Graham joined the European Child Welfare Department in April 1951, when a whole-time Health Visitor post was first established, and the Department owes to her untiring and magnificent work the excellent foundations on which it has since grown to its present high level. She was a tower of strength to a vast circle of mothers, a beloved "Auntie Pat" to countless children, and a dear friend and valued colleague to all who worked with her.

### HOME VISITING

The Health Visitor continued throughout 1955 to visit all newborn infants in hospital, and our continuing gratitude goes to the Matron and staff of the Princess Elizabeth Hospital for their unstinted help, and for their forbearance when the Health Visitor's arrival coincided with that of a new baby. An appointment for a "follow-up" visit at home was arranged during the hospital visit—a service particularly appreciated by the young mother who goes home to find herself suddenly in sole charge of her precious first-born and much in need of practical guidance — and continuing contact with the new infant was thereby ensured. Subsequent visits were severely restricted in number by the limited time available, and only in exceptional circumstances (such as a frail or premature infant or prolonged maternal illhealth) was it possible to visit more than once. Visits to the older children were also far fewer than was desirable, and all too often we lost contact with toddlers through the family moving house in the long interval between one visit and the next. The Health Visitor is already working at full and indeed excessive pressure, averaging 14 visits per morning which allows 15 minutes for each visit including time taken up in transit, house-finding etc. Her afternoons are wholly occupied with clinics. The appointment of an additional Health Visitor is a matter of urgency if this vital service to the next generation is even to be maintained—let alone expanded to keep up with the expanding population. Even now "visit-ability" is less than one third of "visit-desirability".

As in former years, special attention was paid to visiting the homes of children who were left in the care of ayahs or Seychelloise nannies, and the Health Visitor reports "no cases of ill-treatment or neglect were encountered and on the whole these children were clean, well fed and healthy".

A significant observation on health in relation to house construction may be of value in deciding future housing policy: "The Government houses in Kileleshwa and at Nairobi West (Public Works Department) were in poor condition and inclined to be damp. This was probably the cause of the frequent colds observed in children

who lived in them and could be avoided with better built housing.”  
The houses in question are constructed of pise de terre.

CONCLUSION

The European Child Welfare service is now fully seven years old and in that time has grown from a single ill-patronised inoculation session to its present flourishing state of four busy sessions a week and a full-time health visitor fully occupied in watching over the health of the City’s children in their homes as well as in the clinics. It has proved its worth and has become established as a valued and valuable service having a recognised place in the medical structure of the City. We believe and hope that it will continue to do so, and to grow even faster in the next seven years: but this hope is doomed to frustration unless the staff can be increased—with our present staff we have reached saturation point.

STATISTICAL RECORD

Attendances

				Parklands	Woodley	Total
0 — 1 year	...	...	...	1,851	1,232	3,083
1 — 6 years	...	...	...	1,505	1,402	2,907

New registrations

0 — 1 year	...	...	...	209	112	321
0 — 6 years	...	...	...	231	188	419

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Immunisations

Vaccination	...	...	...	...	249	179	428
Diphtheria	...	...	...	...	110	62	172
Whooping cough	...	...	...	...	11	6	17
Diphtheria/whooping cough	...	...	...	...	346	202	548
T.A.B.	...	...	...	...	187	149	336

Home Visits

Hospital	First visit — home	Revisit	Total
584	425	2,483	3,492

Comparative figures, 5 year period

		1951	1952	1953	1954	1955
Attendance for advice, etc.	...	2,311	3,971	3,848	3,722	5,990
Vaccination	...	117	257	307	287	428
Diphtheria	...	256	405	487	122	172
Whooping Cough	...	234	339	523	9	17
Diphtheria/whooping cough	...	—	—	—	219	548
T.A.B.	...	116	141	428	74	336
Totals	...	3,034	5,113	5,593	4,433	7,491



## SECTION II

### DAY NURSERIES

#### Parklands Day Nursery

The Nursery was full to overflowing during the whole year and continues to have a long waiting list for vacancies. The building of the extensions in 1957 should permit 30 to 40 additional children to be cared for.

The health of the children was very good, sore throats and cold causing the most absentees. There were three cases of chicken-pox and ten of measles.

The staff worked excellently throughout the year, although there were several changes because of overseas leave, and resignations because of husbands being posted.

**Sports Day.** The Annual Sports Day was held in June.

**Art Exhibition.** Five exhibits, all of which were accepted, were entered for the Junior Art Exhibition which was held in the Memorial Hall. This was a most gratifying honour.

**Christmas Concert and party.** The Nativity play "How The Fir Tree Became The Christmas Tree" and the pantomimes "Red Riding Hood" and "The Old Woman Who Lived In A Shoe" were produced early in December. A charge was made for admission in aid of Gertrude's Garden Children's Hospital Extension Fund and the sum of £85 was donated to the fund.

**Woodley Day Nursery.** During the first part of the year the nursery continued to make steady progress, the daily attendance remaining around the 100 mark, thus showing satisfactory increase in numbers since the opening. Parents, on the whole, appeared to be satisfied with the conditions, the only reiterated complaint being that the children were not getting enough education. It is difficult to persuade parents that the nursery is not a school and, even if it were, that it is not always advisable to force "education" on to very young children. An important point which often escapes children's parents is that educational methods have altered so much that the children do not often realise that they are being taught and that they are learning; they communicate such education to their parents as "games" with the result that parents possibly think that less education is done than is actually the fact.

The Christmas party, at which Father Christmas distributed gifts to all the children was a very great success, much enjoyed by the children and their parents.

The staff worked enthusiastically throughout the year, despite some instability because of resignations, "long leave" and so on. Unhappily, Mrs. Newton, who has been matron virtually since the beginning of the nursery, resigned in June. She worked hard and



efficiently to make the nursery successful and popular. Sincere thanks are due to her for her efforts.

Mrs. Thornton succeeded Mrs. Newton in August, Mrs. Salmon acting as matron between June and August. Mrs. Salmon has saved, rather than helped, the Department on many occasions before — and always with great willingness and efficiency. Her assistance on these many occasions has not gone unnoticed and we owe her a debt of gratitude.

There was an outbreak of measles during July, August and September, but, this apart, the health of the children was very satisfactory.

**Highridge Day Nursery.** After a very disappointing beginning with only 27 children, the maximum number of 60 was reached in August, but declined again to 52 by the end of the year.

His Worship the Mayor, Alderman I. Somen, paid a visit on the 20th July, and seemed very satisfied with the progress of the nursery which continued to flourish in spite of a critical article which had appeared in the “Colonial Times”.

The main reason noted for placing children in the nursery was for the purpose of education.

During the heavy rains there were many leaks in the building, but when repairs have been done, the building will be very satisfactory.

Parents and children enjoyed the Christmas party on December 10th at which an excellent concert was given by the children.

The number of cases of withdrawals without notice declined when parents became aware of the fact that full fees for the month would be charged for defaulters in this respect. Although there have been many withdrawals, only one of these was stated to be due to parents dissatisfaction with nursery conditions.

Coughs, colds and influenza were the most prevalent complaints. There were several cases of tonsillitis and one child was away for two months after a severe attack, followed by tonsillectomy complicated by haemorrhage. The total number of infectious diseases was — measles 10, german measles 2, mumps 2, chickenpox 8 and whooping cough 1.

**Day Nursery Attendances**

	Parklands		Woodley		Highridge	
	1954	1955	1954	1955	1954	1955
Regular full day ...	15,296	15,903	22,251	21,451	4,386	6,363
Regular mornings ...	6,722	7,595	2,211	2,717	1,438	4,839
Casual full day ...	576	953	596	76		28
Casual half day ...	653	755	87	55		34

## SECTION 12

### ASIAN MATERNITY AND CHILD WELFARE

The year just ended was again a year of Emergency, but of a happily improved complexion. With the general return to nearer normal came a similar readjustment in the work of this department, both clinic and district activities conforming much more nearly to the pre-emergency pattern.

#### STAFF

Dr. Philippa Gaffikin continued throughout the year as the full-time Medical Officer in Charge. From January to September Dr. Ann Linsell assisted in the department in the mornings. Dr. Linsell resigned at the end of September and the post remained unfilled for two months during which Dr. Gaffikin carried out the double duties on a week-about basis — an unsatisfactory compromise — until Dr. Ruth Hume was free to take on the part-time appointment.

Mrs. Margaret Arthur was Supervisor of Health Visitors, Midwives and Dais throughout the year. Her reorganisation of the methods of record keeping was completed early in the year and enormously simplified the entire working of the department, and she maintained her steady persistent drive against poor standards of midwifery.

The nominal establishment of Health Visitors for 1955 was 8, and of these posts 6 were constantly filled by Mrs. Tyagi, Mrs. Nayer, Mrs. Daya, Mrs. Safri, Mrs. Sandhu and Miss da Cruz. Mrs. Chaddah left on January 31st, and Mrs. Pachecos completed her first tour at the end of August and proceeded on overseas leave to Edinburgh where she is undertaking training for the S.C.M. The vacancy created by Mrs. Chaddah's resignation was filled on September 1st by the appointment of Miss Ramzan, but for the greater part of the year the post was unfilled and the Eastleigh district had only one Health Visitor.

#### BUILDINGS

**Ngara Clinic.** This clinic was rebuilt during 1954 and the building is now adequate in size, very pleasing in design and decoration, and in every way satisfactory. In the course of the year the Parks Department laid out the grounds, thereby providing a pleasant setting for the clinic and its work.

**Victoria Street Clinic.** This building has now been in service for 5½ years. It is showing almost no evidence of wear and tear, a clear instance of the wisdom of constructing to a high specification.

**Eastleigh Clinic.** Though built to the same design as Victoria Street, the Eastleigh Clinic was completed to a lower standard of

finish, and although in service for only 3½ years it is already showing more signs of wear than the older building.

**Sandiford Road Clinic.** This small clinic was redecorated inside and out in the latter part of the year, and careful selection of colour schemes has produced a vast improvement. There is now an effect of light and space in happy contrast to the former gloom. The ready assistance and cooperation of East African Railways and Harbours (who own and maintain the building) is very warmly appreciated.

**Fort Hall Road Clinic.** The position for this district continued unsatisfactory. Although organised and conducted for more than two years as a separate clinic entity with its own staff and sessions, there is still no separate building. The district has a very large element of Railway employees in the population, but although promises of assistance from East African Railways and Harbours in the provision of a building had been made, the year ended with its activities still being conducted in Ngara Clinic.

**Parklands Clinic.** The situation on this area is going from bad to worse. Home visiting revealed an increasing degree of overcrowding, with the usual concomitant fall in amenities and — more serious — in hygiene. A suitable clinic site is available and has been earmarked for the purpose, but financial provision for a building was not forthcoming in 1955 and though requested again most earnestly for 1956 was again turned down.

**Nairobi South Clinic.** This new residential area is being developed by East African Railways and Harbours, Government, the High Commission, and private enterprise, and all have gone ahead in their building activities with so much vigour that the population is going up by leaps and bounds. Clinic accommodation is to be provided by East African Railways and Harbours and thereafter staffed by this department, but up to the end of 1955 no definite construction had begun.

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## TRAINING

**Health Visitors.** The third Health Visitors' Training Course, which commenced in September 1953, was completed in July 1955, and it is gratifying to report that all seven students qualified.

The period from January to July was divided into two academic terms, during which tuition comprised lectures, practical instruction and demonstrations, health talks, tutorials, observation visits and study periods as detailed below.

### January Term :

Subjects : "On request" subjects, Midwifery, Public Health Administration, Hygiene and Sanitation, Domestic and Personal Hygiene and Postnatal Exercises.

Practical tuition was given by the Medical Officer in Charge and by the Supervisor in the administration of public health clinics, the



conduct of antenatal, postnatal and child welfare sessions, and in exercise classes and home visiting.

Each student spent a period of two weeks at Pumwani African Maternity Hospital, gaining valuable experience in practical midwifery under the tuition of the Medical Superintendent, Matron, Sisters and staff.

A comprehensive programme of tutorials and health talks with the appropriate test papers was given by the Supervisor.

Observation visits were made to the Kenya Cooperative Creamery, Naivasha, to observe the preparation and storage of milk and milk products; and also to the Kenya Cold Storage Company to demonstrate the storage of perishable foodstuffs.

### **May Term:**

Subjects: "As requested," Midwifery and Domestic Hygiene.

Frequent revision classes on all subjects were held throughout the term.

Observation visits were made to the Welfare Department of the British Military Hospital and to the Medical Research Laboratory.

Final examinations for the Diploma in Health Visiting (Kenya) were held in the period 4th to 15th July, the Examining Board being made up of the lecturers in the various subjects and External Examiners selected by the Director of Medical Services.

The examination followed the established pattern of written papers on each subject followed by practical and oral examinations and finally a demonstration Health Talk to an audience of the entire Examining Board.

At a ceremony held on the 28th July, His Worship the Mayor, Alderman I. Somen, presented Diplomas to the successful candidates. One of these candidates is already employed by Council and it is hoped that most, if not all, the others will be employed by the department in the near future.

**Midwives.** The annual Midwives' Refresher Course was held from 17th October to 2nd November, and at its close certificates of attendance were presented to 25 midwives who had attended with regularity.

The course was inaugurated by Alderman Nathoo, and consisted of lectures, lecture-demonstrations and visits to places of professional and general interest. An innovation introduced this year was an open discussion on "The Improvement of the Present Midwifery Service", which was attended by midwives together with the Deputy Medical Officer of Health, the Supervisor of Midwives and Dais, and several members of the medical profession. Dr. J. R. Gregory, O.B.E., very kindly consented to take the chair, and under his helpful guidance midwives were able to discuss in open forum many individual problems.



The Asian Maternity and Child Welfare Department offers most grateful thanks to the many good friends who so generously gave of time and trouble to assist the Health Visitors' Training Course and the Midwives' Refresher Course.

## CLINIC ACTIVITIES

**Antenatal Welfare.** Antenatal sessions were held weekly throughout the year for each of the five areas; and a session for consultations and contraceptive instruction was held at Victoria Street Clinic each Thursday. A further effort to reduce congestion took the form of advising against unduly frequent repeat visits in the early months of pregnancy — a weekly instead of monthly attendance during the first five months means 20 visits where 5 would be ample — and overcrowding of clinic facilities was thereby diminished leaving more time available for cases where there was real need. The total attendance for the year was 5,712 and the number of new registrations 1,607 — both totals being greater than in 1954. This represents a more effective service to a larger number of expectant mothers, and with enhanced individual attention.

There were six maternal deaths during the year, occasioned as under:—

1. Obstetric shock and postpartum haemorrhage.

The patient had attended the antenatal clinics and both pregnancy and delivery had been normal until after the birth of the child when haemorrhage occurred without warning.

2. Obstetric shock and postpartum haemorrhage.

Haemorrhage occurred after delivery of a hydrocephalic foetus. There was no evidence of any antenatal care and as far as could be ascertained the patient had taken no steps to obtain professional advice until just before delivery when she booked in at the Indian Maternity Hospital.

3. Heart failure

The heart failed suddenly after delivery of twins. She had been a clinic attender, and there had been no premonitory symptoms.

4. Placenta praevia, gross anaemia, intrapartum haemorrhage

This patient had been an in-patient at Fort Hall Hospital, but went home against advice and was admitted to the Indian Maternity Hospital in a moribund condition.

5. Postpartum haemorrhage

Delivered by a dai. The haemorrhage occurred within one hour of delivery. The dai had already gone and could not be located. The woman had been left entirely alone while her relatives took part in a festivity; when found she was almost exsanguinated and though medical aid was summoned it was too late.

6. Puerperal sepsis

Delivered by a dai. A doctor was in attendance from the 4th day of the puerperium and the patient was admitted to King George VIth Hospital, but therapy was unable to overcome a fulminating infection.

Of these cases numbers 1 — 4 could hardly have been foreseen and cannot be regarded as preventable. The state is far otherwise in cases 5 and 6. In case 5, the dai is primarily blameworthy in that she must have left her patient far too soon after delivery, without making sure that all was well and that proper care and attention were provided, and making no provision for a means of contact should her attendance again be needed. Blame also rests on the woman's family who were too taken up with their festivity to give her proper care, but they are much less culpable since they could reasonably feel that having engaged a dai they could leave the patient's welfare in her hands.

In case 6 the fault was not in lack of care but in lack of prevention — the patient was well looked after and vigorous therapy instituted as soon as infection became evident, but the damage had already been done. It is impossible to pinpoint the exact source of infection, but grave suspicion rests on a particularly dirty woman who goes round with this dai in the capacity of a charwoman.

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**Child Welfare.** An altered method of recording child welfare clinic sessions was adopted from January 1955, whereby morning and afternoon periods are shown separately and a clinic lasting all day is noted as two sessions. Child welfare sessions recorded on this principle were held as shown in the Statistical Table — two per week at Ngara, Eastleigh and Victoria Street, one per week at Sandiford Road with an occasional "extra" and one per week for the Fort Hall Road area with an extra session approximately every other week. A medical officer was present at one session per week at every clinic.

Attendance at child welfare clinics during the year totalled 14,732, an increase of over 2,000 compared to 1954. The new registrations of "under 1 year" were 1,741 and of "1—5 years" 900, which represents a sharp rise in infant registrations and a fall in those of toddlers, a situation precisely reflecting that of the home visiting programme. Limitation of staff made impossible a full visiting schedule for all ages, and the greatest effort was therefore concentrated at the point of greatest need, the first year of life, and produced a concomitant response in clinic attendance.

The table recording deaths of children under the age of 5 years shows with painful clarity just how great is the danger in the first year of life, and particularly at the beginning of that year. There were 162 deaths before the first birthday, contrasting with 14 in the four groups of 1 — 2, 2 — 3, 3 — 4 and 4 — 5: and 93 of the 162 were

attributable to conditions peculiar to the immediate neonatal period. One of the major arguments in support of early mixed feeding — a cardinal point of this department's child welfare policy — is that the consequent rapid growth cuts short the period of neonatal frailty and gives the child a "stockpile" of bodily vigour to withstand any onslaughts.

Once past the "danger zone", infant and toddler health during 1955 was very good. There were no major epidemics, the normal scattered outbreaks of exanthemata were of mild type, and five years of plugging the theme of "feed the brute" is at last producing an improvement in child nutrition. Active immunisation has also contributed to the rising health level of young children, and such is the degree of immunity to smallpox, diphtheria, whooping cough and the typhoid group that the deaths from these diseases in 1955 were nil. This satisfactory situation stems from both individual and group immunity, and the one difficulty now is to induce the public to keep up immunisations in the absence of obvious risk.

Christmas parties for regular attenders were again held during December at all the clinics, as a means of encouraging the well-intentioned and stimulating the laggard, and again we have to thank the many generous people who by gifts in cash and kind enabled us to give mothers, infants and toddlers a wonderful time.

**Immunisations.** Active immunisation against smallpox, diphtheria, whooping cough and the typhoid group was provided at separate sessions held each Saturday morning at each clinic, and full use was made of the facilities available. The numbers protected against smallpox, diphtheria and whooping cough were about the same as 1954, but there was no outbreak of typhoid and consequently a much diminished acceptance of T.A.B.

**Home Visiting.** The systematic method of home visiting at regular intervals proved most advantageous to both mothers and staff. On the one hand parents came to expect the health visitor and any defect in child or home received repeated attention until it had been eradicated: while on the other hand the health visitors felt, to quote one of them, "It makes our work so much more interesting" and that they were far more exactly aware of what had been done and what still required to be done in their districts.

A satisfactory schedule of home visits requires that a new infant should be visited as soon as the midwife ceases to attend, or at least before the age of three weeks, and thereafter not less often than once a month till the age of 12 months. After that age toddlers should be visited quarterly till the fifth birthday unless they are brought regularly to the clinic. Owing to shortage of staff it was quite impossible to approach this ideal, let alone achieve it, and the health visitors could do little more than visit regularly the under-twelve-



months. Although the total of home visits rose by 4,000 to 21,081 this was very largely infant visiting: only a small percentage of toddlers could be visited with anything like regularity, with the result that deviations from normal progress were sometimes not seen until too late for satisfactory treatment.

**Health Education.** Films were shown at monthly intervals at all clinics in the early part of the year, and were well attended at Victoria Street, Eastleigh and Sandiford. Attendances at Ngara/Fort Hall Road were never good, and finally fell so low that showings at this clinic were discontinued.

Fullest use was made of visual demonstrations, which have proved extremely popular. It was quite usual to see groups of mothers around the displays, explaining the meaning of them to their children or to other mothers.

Antenatal and postnatal exercise classes were even better attended than before, and were evidently greatly appreciated. An effort is now being made to have the midwives present with their patients so that they may be fully conversant with the methods taught, in order that the patient may derive the greatest possible benefit at the time of delivery as well as before and after.

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The department contributed its share to two Health Exhibitions during the year, one at the Teachers' Training College, and the other at a much larger exhibition in the Memorial Hall.

Two competitions for parents were held in the first half of the year; one for mothers, to provide a handmade outfit of clothing for infant or toddler, the cost not to exceed 20/-; and one for fathers, to make a simple toy. Prizes were most generously donated by Messrs. Kassam Kanji and Sons, Limited, Mr. Modi, and Messrs. Ahamed Brothers, Limited, and were awarded for the best entries in the clothing competition where the response was fairly good. The toy competition was abandoned for lack of interest — Asian fathers do not appear to be active "handymen".

## CO-OPERATION WITH OTHER HEALTH SERVICES

**Private Practitioners.** A separate session for consultations and for instruction in family planning was held weekly at Victoria Street clinic, and a total of 146 cases were referred to this clinic by private practitioners for gynaecological examination and opinion.

**Indian Maternity Hospital.** The Medical Officer in Charge, as ex officio member of the hospital Management Committee, attended special and general committee meetings throughout the year. The parlous financial state of the institution, and its urgent need of funds for essential short-term and long-term improvements, were the main



theme of all the deliberations, but progress towards a solution was sadly limited.

Lectures in midwifery to the probationers were given regularly by Dr. Linsell from January to the end of September.

**Midwives.** Birth notifications were made weekly by the majority of midwives, but there remained a few who needed constant reminding. The standard of record-keeping was still far below what it should be, but credit must be given to a small group who never failed to bring in their registers and to seek help in completing them. In cases where the midwife is unable to write, visits were paid to husband, son or daughter who cooperated admirably in maintaining the essential written records.

The Supervisor visited four cases during the year at the request of midwives, two of which were delivered normally at home while the other two were admitted to hospital. Both the latter were complicated breech presentations and both were successfully delivered. Mrs. Tyagi was also called out by a midwife to a difficult case, and on her advice medical aid was summoned.

**Dais.** The weekly dais' meeting was continued throughout the year when dais notified births and discussed their problems. Simple practical demonstrations and talks were given at intervals, and it was arranged that Mrs. Tyagi devoted three sessions per month to visiting cases with dais and supervising their work.

During the year the Nurses and Midwives Council summoned one dai before the Disciplinary Committee to answer charges of malpractice: the dai was severely reprimanded.

At the time of writing this report, there are practising within the City boundary 25 midwives and 18 dais, who deliver 72% of the total births. District midwives and dais whilst delivering babies are often faced with difficult and worried relatives, who prove tiresome and obstructive. They are often called to emergencies where the patient has never been examined at an antenatal clinic or by the family doctor. The patients give vague and inaccurate histories, and this can and has been known to lead to serious results.

Under the present system of training of Asian midwives, there is no provision for practical district training before qualification and domiciliary midwifery presents problems very different from those occurring in hospital practice.

It is strongly urged that in view of these circumstances midwives and dais need and deserve considerably more guidance in connection with their work than they now receive, and this could be achieved only by the appointment of a full-time Supervisor of district midwifery.

It is most regrettable that there are still no bylaws to control the conduct and standards of midwifery within the city area, and to

enforce rigid adherence to the Midwives' Rules already defined by the Nurses and Midwives Council but as yet impossible to enforce by that body which necessarily works on a Colony-wide basis. The introduction of such bylaws, together with the appointment of a Supervisor of district midwifery on a whole-time basis, would have the utmost effect in raising the standard of domiciliary midwifery and in creating closer co-operation between the Public Health Department, private medical practitioners and the midwives.

## CONCLUSION

The most sensitive index of a community's health is its infant mortality rate, the number of children dying before the first birthday in proportion to every thousand babies born. The rate for 1955 in the Asian community was 43.78 per thousand, a fall of 7 per thousand compared with 1954. This is an encouraging trend, reflecting improved standards of infant welfare and the spread of knowledge regarding child care and home hygiene. Once past the first month, an infant's life expectancy has risen, and in this can be seen a positive result of the Asian Maternity and Child Welfare Department's long campaign for health education. But this improvement though encouraging is no cause for complacency. As the more easily preventable infant deaths are reduced in number we come nearer to the hard core of infant mortality, the deaths which occur in the immediate neonatal period. The causes of these deaths are threefold, maternal, foetal and environmental; and all three are interlocking. An unhealthy woman gives birth to an unhealthy infant lacking resistance to a hostile environment. Maternal ill-health may stem from ignorance — of bodily needs, good diet, air and exercise: or may arise through overcrowding — making all living an effort and that little extra effort for healthy living just too much to be achieved: or derive from lack of means in relation to the cost of living — means to purchase proper or sufficient food, proper or sufficient living space. Foetal ill-health may result in stillbirth, or an infant is born weakly and lacking the vigour to combat poor home conditions, inadequate or ill-judged feeding and the onslaught of infection.

Against this triple attack on child health our response must be counter-attack by health education, in every aspect of a child's life. It should begin with "family planning" so that children are born of a healthy mother not exhaustive by excessive childbearing, and into a family happy to welcome and financially prepared to maintain the newcomer: going on to antenatal supervision so that a healthy woman is delivered of a healthy infant: thence to postnatal care so that the mother of a family, the pivot of its existence, herself enjoys full health and can give of her best to her home: and to infant and toddler welfare so that the new citizen is shielded from preventable ill-health.

# STATISTICAL RECORD

Sandiford Victoria Fort Hall

Ngara Eastleigh Road Street Road Total

## Antenatal Welfare

Clinics held	...	50	52	47	52	47	300
Attendances	...	1,603	1,442	345	1,255	841	5,386
New Registrations	...	551	389	73	322	272	1,607
Consultation Clinics ...					226		226

## Child Welfare

Clinics held	...	93	98	58	95	83	427
Attendances	...	4,330	3,271	1,447	2,988	2,696	14,732
New Registrations							
0 — 1 yr.	...	510	374	118	336	403	1,741
1 — 5 yrs.	...	211	240	125	159	165	900

## Immunisations

Vaccination	...	457	407	253	369	350	1,836
Diphtheria/ Whooping cough		100	147	149	52	97	545
Diphtheria	...	1	1	26	—	1	29
T.A.B.	...	85	289	374	43	79	870
Whooping cough	...	2	—	—	8	8	18

## Home Visits

Supervisor	...	—	—	—	—	—	148
Health Visitors	...	3,541	2,968	3,180	5,951	2,602	18,242
Students	...	—	—	—	—	—	2,691

Attendances at Lectures, Classes, etc.	...	534	511	983	247	55	2,330
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### Comparative Figures 5 years period

		1951	1952	1953	1954	1955	
<b>Antenatal Welfare</b>							
Attendances	...	4,817	5,285	5,034	5,453	5,712	
New Registrations	...	1,444	1,803	1,481	1,518	1,607	
<b>Child Welfare</b>							
Attendances	...	11,844	12,513	14,403	12,686	14,738	
New Registrations							
0 — 1 yr.	...	1,292	1,595	1,499	1,417	1,741	
1 — 5 yrs.	...	1,151	1,486	1,467	1,152	900	
<b>Home Visits</b>							
All staff	...	11,780	11,815	12,966	17,107	21,081	
<b>Total Attendance</b>							
All ages, all clinics	...	—	—	25,448	22,703	26,072	
<b>Notification of Births</b>							
Indian Maternity Hospital	...	...	...	...	...	565	
Alice Beaton Nursing Home			...	...	...	46	
Ideal Nursing Home	...	...	...	...	...	218	
Sunshine Nursing and Maternity Home				...	...	117	
Midwives	...	...	...	...	...	1,740	
Dais	...	...	...	...	...	946	
Doctors	...	...	...	...	...	15	
						<hr/>	
						3,700	
	Less still births			...	...	72	
						<hr/>	
	Live births			...	...	3,628	
Infant mortality rate (per thousand live births)						...	48
Deaths under one year of age						...	162

## Causes of Stillbirth

Abnormal position	...	...	...	...	3
Accidental haemorrhage			...	...	1
Anencephaly	...	...	...	...	1
Asphyxia	...	...	...	...	1
Delayed labour	...	...	...	...	4
Intracranial injury	...	...	...	...	3
Macerated	...	...	...	...	11
Malformation	...	...	...	...	4
Non-viable	...	...	...	...	1
Prematurity	...	...	...	...	9
Toxaemia	...	...	...	...	7
Cause unknown	...	...	...	...	27

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**Causes of Death —  
Asian Children under 5 years**

					Under 1 year	1—5 years
Accident	...	...	...	...		1
Anaemia	...	...	...	...		1
Asphyxia	...	...	...	...		1
Atelectasis	...	...	...	...	1	
Burns	...	...	...	...		1
Cerebral haemorrhage	...	...	...	...	1	
Cirrhosis of liver	...	...	...	...	2	
Congenital malformation	...	...	...	...	6	
Convulsions	...	...	...	...	1	
Debility	...	...	...	...	1	
Encephalomyelitis	...	...	...	...	1	
Fracture of skull	...	...	...	...	1	
Gastroenteritis	...	...	...	...	22	4
Haemorrhage, congenital	...	...	...	...	1	
„ intestinal	...	...	...	...	2	
„ intracranial	...	...	...	...	5	
Haemorrhagic Disease of newborn	...	...	...	...	1	
Heart enlargement, bacterial	...	...	...	...		
carditis	...	...	...	...		1
Heart failure	...	...	...	...	4	
Hyperpyrexia	...	...	...	...		1
Icterus neonatorum	...	...	...	...	1	
Intestinal obstruction	...	...	...	...	1	
Jaundice	...	...	...	...	2	
Malnutrition	...	...	...	...	3	
Marasmus	...	...	...	...	2	
Murder	...	...	...	...		1
Nephritis	...	...	...	...		1
Pneumonia	...	...	...	...	26	
Prematurity	...	...	...	...	74	
Pulmonary oedema	...	...	...	...	1	
Pyloric stenosis	...	...	...	...	1	
Respiratory failure	...	...	...	...	1	
Septicaemia	...	...	...	...		2
Toxaemia	...	...	...	...	1	
Totals					162	14

## SECTION **13**

### **AFRICAN MATERNITY AND CHILD WELFARE**

#### **STAFF**

##### **European.**

Dr. J. A. T. Henry was Medical Officer in Charge during the year but went on overseas leave from 1st May to 31st October, when Dr. V. R. Hume acted for her. No full-time replacement was obtained for Dr. Brown, who had resigned in November, 1954, until Dr. E. Harkard started work on 1st September, and therefore throughout the year the work of nine clinics was undertaken by one and a half medical officers and consequently supervision and training and teaching were not carried out as efficiently as they might have been, although every endeavour was made to maintain the work at a high standard.

The Supervisor reported on the Health Visitors — “A difficult year, with an unprecedented number of changes in the staff and a high incidence of sickness, always a difficult situation to combat with distances so great and communications so poor. As the onus of relief duty has always been on the supervisor and, as to the date of submitting 1956 estimates relief commitments had already passed the 365 days’ mark and supervising duties in 1956 were likely to be extended to cover three extra centres, it was considered necessary to estimate for a Health Visitor whose sole duty would be sick and leave relief. It is anticipated that such relief duty in 1956 will be a good deal more than 365 days and the supervisor will still be committed to a certain amount of it.”

Since consolidation health visitor’s posts are not so attractive to married women as Council will not grant leave without pay so that women can go overseas with their family. Lack of accommodation is a deterrent to single women. So it may be necessary to obtain special concessions on these two points if we are to get the best people for the posts and obtain some length of service from them which is essential since being well known by the African men and women is a factor of primary importance for the efficiency of this service.

##### **African.**

The department was 1,415 working days under establishment in the “nursing scales”. This was mainly due to the difficulty in recruiting suitable replacements for maternity absence or resignation. There was a slight improvement in the general standard of

staff offering themselves for employment, but it is still far below our requirements. During 1955 considerable numbers of certificated midwives offered themselves for employment as senior clinic assistants, but their standard of general education was so low that the qualification could not be accepted as a basis for training a clinic assistant—two of the most likely were tried but were not good enough.

The supervisor reported the matter to the Kenya Nursing Council and gave it as her opinion that a higher standard of education was imperative for student midwives if, on completion of their training, there was to be any degree of general intelligence required of them. This general standard is very depressing, as it has always been one of the objectives of this department to obtain African women with a nurses and midwives training, who could be recommended for a local health visitors course.

The Government Ear, Nose and Throat Department trained another of our assistants to examine and treat cases of chronic otorrhoea at Kaloleni Clinic, our first woman to be trained having resigned for family reasons.

## REVIEW OF ACTIVITIES

### General.

The total number of attendances at all clinics throughout the year was 163,072.

The total number of examinations done by the medical officers was 16,776, which included 1,023 nursery school children (Railway and City from 1st September — 31st December) and 148 routine quarterly F.F.I. examinations for clinic and nursery school staffs.

1955 has been a difficult year for this service although the “political” conditions of the work have apparently improved and it is more obvious than ever that it will take years to restore the relationships within this service and the standard of teaching to the mothers to what they were in 1950/51.

For security reasons home visiting is still done in pairs and the closure of the Government Dispensary at Shauri Moyo and the extension of African housing with no additional dispensary service has increased the number of cases which have had to be treated in the clinics and these two factors have reduced the clinic assistant hours available for other work.

Pumwani Clinic has remained closed (being used by the City African Affairs Department) but the mothers have attended from Gorofani and Bondeni at Kariokor Clinic, which to accommodate them has been divided into Clinic ‘A’ in the main building and Clinic ‘B’ in the smaller building, which used to be the supervisor’s office and store. For statistical purposes the figures from A and B have been absorbed into one total.

Posts and Telegraphs clinic is very overworked, as, in addition to increases in the Government housing served by it, the families in



Mbotela estate, both Nairobi City Council section and employers' housing, have become so numerous that it has been impossible to give more than superficial help to them.

Should the new clinics in Mbotela and Ofafa not materialize early in 1956 then, in my opinion, we have lost a great opportunity to educate the women and children there before they settle into bad habits.

I cannot urge too strongly that the care of the grounds round the houses in all the estates in Nairobi — Government, City or privately owned, should be the tenant's responsibility, and any expenditure in fencing required would be repaid in the saving in grass cutting and sweeping and in the improved conditions.

Bahati gardens illustrate some degree of improvement but it hampered there by lack of adequate drainage from latrine blocks. A third clinic is to be built in Makongeni Estate and is needed urgently to deal with the ever increasing population, as each new block of flats is completed. We would thank the estate officials of the East African Railways and Harbours for their cooperation and helpfulness in all matters relating to the working of the clinics in their estates.

All clinics had Christmas parties and they achieved a greater spirit of friendliness this year than at any time since the emergency and were well attended and enjoyed.

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### **Ante Natal Clinics.**

The total number of new cases was 2,540 and the total attendance 7,341, i.e., 695 and 2,405 more than in 1954. The post natal examinations were 321, that is, 113 more than in 1954, and the distribution of these cases showed that when there is a good district midwife the numbers increased.

### **Child Welfare Clinics.**

Infant welfare new cases were 2,521, an increase of 805 over 1954; pre-school new cases were 2,408, an increase of 90 over 1954; total attendances were 28,983, an increase of 9,261 over 1954.

Transfers and pre-school registers were 365, but this figure is influenced by the number of children on "Casual" cards, due to much moving of the families in the City throughout the year.

The ruling principle in all of the children's clinics has been to reduce the impression of haste, which is difficult to avoid when dealing in large numbers, by reducing the number of times a healthy child is asked to report, i.e. a P.S. child from 4 weeks to 6 weeks, and to concentrate on the personal teaching to each mother.

A great problem to be faced is the fate of the family when both parents work. If the mother is in the Reserve, then in many cases the children are locked out of the house till father returns from work. If mother works then frequently an "ayah" is employed, the age group of these employees being 8—11 years. It is by no means the



children of the so-called uneducated who fare the worst, (their parents seem to have a greater sense of responsibility to their children) but rather those of parents with more scholastic achievements and in some cases of parents, who are employed in the Social Services.

Three things might help the fate of these neglected children:—

1. To develop legal powers through a good S.P.C.C. Society.
2. To educate both parents in their responsibility to children.
3. To hold classes for the juvenile ayahs.

The economics of the creche or nursery school systems as a solution appear to have defeated the Welfare Departments. I should think this is due to inadequate departmental income and lack of co-operation by the African parents.

Attendances at clinic milk bars numbered 21,895 for 1,209½ gallons of milk. As in previous years it was used mainly to teach weaning age children to like milk and for convalescents and Kwa-shiorkor and Tuberculosis cases. "Incumbe" was sold in the clinics till November; since when it has not been available and we are hoping to teach the mothers to buy and use a local dried milk powder, which is much cheaper than fresh whole milk and supplies the protein, which is the great deficiency in the children's diet.

### **Dispensary Services.**

The total attendances were 81,288 a decrease of 3,343 compared with 1954. An adequate dispensary service is needed urgently throughout Nairobi and we look forward to the day when there will be multiple dispensaries within easy reach of the estates and perhaps even a readily accessible hospital for treating short term cases. Until these are forthcoming no ambulance service can hope to cope with the needs of the African community and the present crippled vehicles do not even begin to deal with the acutest cases.

The point of view of Council towards this section of the Public Health Department cannot be understood, as an effective ambulance service can save so much in suffering and lives and such mundane things as professional working hours and medical expenses.

### **Home Visits.**

As stated, for security reasons all visiting was undertaken in pairs, but it is hoped that, with the exception of certain areas where the clinic staff is not welcomed yet, all members will be able to visit freely before long.

The total visits for the year were 17,086.

### **Sanitation and Housing.**

Throughout the African housing a much greater effort has been made to improve the upkeep of estate grounds, drains and latrine and ablution blocks. Most health visitors reported that where latrines are reserved for one family or for a limited number of people,

they are fairly well kept, but public latrines are still misused and where the service of cleaners is limited the result is bad.

The same applies to the use of open drains and dustbins; where responsibility can be pinned to a few then the upkeep and use is satisfactory. Surely this should be an incentive to making tenants responsible for the grass and ground and paths etc., round their own houses.

Certain things one reports over years and nothing happens, e.g. the need for redraining and resurfacing Old Kariokor; the condition of Torr's staff block in Kariokor; the absence of drainage in areas of Bahati; for the newer estates the poor condition of drainage and house surroundings before the houses are occupied (this applies equally to Council houses and employers housing) and the fact that no pressure is brought to bear on employers to improve conditions, e.g. Coronation, Overland and Hughes' compounds in the Doonholm Road area.

Post and Telegraphs is an example of a small and neglected Government estate lying next to the very good High Commission housing.

### **Teaching.**

The emphasis this year has been on teaching in the houses of all subjects relating to hygiene and health, with extra instruction on the correct use of outside kitchens, latrines and dustbins and the upkeep of communal ground, and stairs and verandahs in the flats.

Group classes were given in the clinics to invited mothers on baby bathing, ante natal care and preparation, care of infants, toddlers and their diet, personal hygiene and household hygiene. Working mothers add to the difficulties of achieving this teaching in many cases.

To help the newer members of the staff Dr. Hume and Dr. Henry gave weekly lectures on how they should teach the mothers and about the more common illnesses and home nursing. The response to invitations to fathers to come to meet the health visitors to learn about the working of the clinics was good and many do help their wives to cooperate in our instruction e.g. diet, clothing, and separate cots for the children.

### **Medical Aspects.**

The commoner infectious diseases seem to have persisted with some periods of exacerbation, though never assuming epidemic form — these were measles, whooping cough and chickenpox. Only a few isolated cases of mumps occurred. Skin and eye infections are relatively few in number. Chronic ear infections have increased and because of this we are grateful to Mr. Jarvis and his staff at the Ear, Nose and Throat Clinic for training members of our staff, who can treat otorrhoea at the Kaloleni Clinic.

Cases of kwashiorkor in Luo children have increased. Malnutrition in Kikuyu has increased, but a lot of these cases are temporary orphans due to parents being in camps, or in the Reserves and the children in Nairobi. The children of working mothers afford another group of neglect and malnourishment.

One is glad to see the raised standards in clothes and to a less extent house furnishing, but it would be better if the standard of family diet could outpace these instead of lagging behind.

Cases of poliomyelitis, both in the acute and in the later permanently paralysed stage, were fewer.

Tuberculosis has become a major problem, far in advance of the facilities for dealing with it and although we help a few children who are having ambulatory treatment with P.A.S. and I.N.A.H. to have milk and cod liver oil (in the latter months of the year approximately 20 children were attending) it is hoped that the City will have a tuberculosis centre and a specially trained medical officer and health visitor to deal with these cases before the population becomes much more heavily infected.

The large number of respiratory tract and alimentary tract infections amongst the children indicate the need for a local hospital where short term cases can be treated within the reach of anxious parents, who could keep in touch with them and their progress.

1,162 cases of malaria (including clinical) were treated and 484 helminthic infections.

An average of 30 children attended Kaloleni clinic each month to be treated for chronic otorrhoea.

2,687 vaccinations were given and 3,732 inoculations of T.A.B.

### **Nursery Schools.**

Unfortunately due to lack of staff the examinations by a medical officer were only done during 1st September to 31st December. Dr. E. Haskard undertook these and extracts from her report follow:—

**“Municipal Schools :** on the whole the general condition of the children seems quite good. Only two have been seen with signs of obvious malnutrition. Some of the older children (7 years +) were seen at Bahati and the percentage of them with dental caries was extremely high.”

“The teachers generally need constant tuition and supervision where the question of hygiene and cleanliness crops up.”

**“Railway School :** generally the condition of staff and pupils from the point of view of nutrition, cleanliness and tidiness was good. The degree of absenteeism from these schools was extremely small and a reasonable explanation was forthcoming more often than not. Thus, in these schools a detailed and continuous medical history can be kept for each child.”

Dr. Haskard emphasizes the importance of routine blood slide and stool examinations, so that cases can be treated before vaccination and inoculations are done.



	Kariokor (A and B)	Muthurruwa	Kaloleni	Makongeni	Maisha	Bahati V	Bahati (P.W.D.)	Posts and Telegraphs	1950	1951	1952	1953	1954	1955
<b>Ante Natal</b>														
New cases	806	331	223	238	162	383	102	295	1,735	2,098	2,194	1,639	1,845	2,540
Births at home	102	69	65	155	93	135	34	64	382	491	803	532	432	717
Births in hospital	108	80	65	31	15	131	33	107	226	231	363	324	334	570
Total attendances	1,868	1,043	773	893	586	1,036	331	811	5,634	5,448	5,492	4,447	4,936	7,341
<b>Infant Welfare</b>														
0—1 year New Cases	484	310	356	304	189	366	107	405	1,576	1,888	1,696	1,543	1,716	2,521
0—1 year Transfers to P.S. register	87	68	53	46	29	25	37	20	343	429	363	262	249	365
1—5 years New cases	388	375	249	291	200	344	129	432	1,831	2,283	1,753	1,259	2,318	2,408
Total attendances	5,790	3,671	3,466	3,446	3,278	4,101	1,838	3,393	33,798	37,673	25,908	13,626	19,722	28,983
<b>Home Visits*</b>														
By Health Visitors	990	644	311	469	415	153	215	795	5,012	4,751	3,609	576	769	3,992
By African Assistants	3,022	1,816	1,831	1,155	998	1,649	1,009	1,614	15,399	22,343	16,660	3,880	1,869	13,094
Total	4,012	2,460	2,142	1,624	1,413	1,802	1,224	2,409	20,411	27,094	20,269	4,456	2,638	17,086
<i>* In 1955 all visiting was done in pairs for security reasons.</i>														
<b>Dispensary</b>														
Women—new	370	389	259	363	204	378	123	299	6,499	2,293	2,276	1,840	2,263	2,385
repeat	786	732	222	639	436	638	410	676	—	13,938	14,132	5,378	6,531	4,539
Children—new	1,779	1,275	1,605	1,436	1,204	1,879	807	1,645	36,763	8,341	8,457	6,592	8,776	11,630
repeat	7,406	4,824	4,821	9,902	5,973	7,528	6,251	7,612	—	53,702	52,829	32,226	58,555	54,317
Attendances for tonics	1,133	742	810	1,708	1,407	851	523	1,243	—	—	2,716	5,270	8,506	8,417
Total attendances	11,474	7,962	7,717	14,048	9,224	11,274	8,114	11,475	43,262	78,274	80,410	51,306	84,631	81,288



## Laboratory Tests

Kahn specimens	...	...	...	2,060	...	positive	132
Blood slides for malaria			...	6,361	...	„	935
Stools for helminths	...	...	...	2,437	...	„	655

Cervical smears were not taken but cases with leucorrhoea, erosions and vaginitis were referred to the venereal diseases clinic for further investigation treatment.

## Clinic Buildings and Equipment.

The buildings generally are in good repair with the exception that the fitting of a ceiling in Kaloleni has been postponed again and in cold weather the main hall there is cold, cheerless and dark. The furniture and equipment are not being kept as one would like. It should be noted that "lost items" in 1955 could not have had a cash value of more than Shs. 100/-, equalling Shs. 13/- per centre, surely a record for so much minor equipment.

## District Midwives.

Mrs. Davis came back to the post of Supervisor on 1st April. A fresh problem awaited her, namely, the increase of African midwives in private practice and she worked hard to get them to co-operate with her. The outstanding need is legislation to cover this service so that the Medical Officer of Health of Nairobi can demand high professional standards from all midwives practising and be in a position to take disciplinary action should they default.

There are now three midwives practising for the Nairobi City Council and every endeavour is being made to increase this service so that a district midwife will be attached to each of the clinics.

## Maisha and Makongeni

Miss Drucilla Agot — throughout the year.

Normal and dead child — stillborn, after mother in labour.

1½ days, probably mild disproportion.  
stillborn, hydrocephalus.

Abnormal and living

child — 1st a face presentation.

2nd twins — both breeches.

Abnormal and dead

child — presentation of extended legs.

To African Maternity  
Hospital

- 1 mother with a post partum haemorrhage.
- 1 mother collapsed after normal delivery.
- 4 mothers with high temperatures on 5th day.
- 1 mother with foot presentation.
- 1 mother with presentation of extended legs. Midwife called five hours after delivery of child's legs.

### Kaloleni

Mrs. Rebecca John — from 15th February to 11th May.  
(Resigned for family reasons.)

Mrs. Delina Haron — from 12th-31st December.

To African Maternity  
Hospital

- 1 mother with eclamptic fits after normal delivery.

### Muthuruwa

Mrs. Elizabeth Njeri — from 26th October to 31st December.

To African Maternity  
Hospital

- 1 hysterical mother who demanded to be taken.

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DISTRICT	NORMAL LIVING CHILD	NORMAL DEAD CHILD	ABNORMAL LIVING CHILD	ABNORMAL DEAD CHILD	OTHER CALLS	TO A.M.H.	TOTAL	B.B.A.	P.N.E.	INFANT DEATHS
Maisha and Makongeni	145	2	2	1	—	8	158	2	58	—
Kaloleni	9	—	—	—	—	1	10	—	—	—
Muthuruwa	16	—	—	—	—	1	17	—	2	—
	170	2	2	1	—	10	185	2	60	—

## AFRICAN MATERNITY HOSPITAL

### STAFF

There were considerable changes in the staff during the year. Dr. A. W. Watts left in July and her place was taken by Dr. P. M. Anderson. During the absence of the Matron, Miss K. M. Foord, on leave, Miss Heycock, followed by Miss J. Koppert deputised for a few months each. At the end of the year there was a full complement of Sisters and it was found possible to leave a sister on night duty, thereby considerably improving the discipline in the hospital during the night.

### Trainees

Applications for training are as many as ever and the standard of those selected remains high. The vast majority of successful applicants are Kikuyu girls whose standard generally is higher than the rest of the tribes. The girls have worked quite well on the whole, but discipline has been hard to maintain, especially as they have been granted more freedom than in 1954.

In April, 23 candidates sat the examination and 20 passed; in October 7 candidates took the examination and 4 passed; so that for the whole year 80% have succeeded in qualifying. The nursing examination in October produced a 90% pass list.

Trainees are now each supplied with a text book which they greatly appreciate and which they say is a considerable help in their studies.

### General Work

Arising from the lessening of tension due to the emergency the total number of admissions has increased compared with the previous year — the Kikuyu admissions especially have risen. Although the number of patients has increased it has been found possible for them to remain in hospital for at least five days after delivery. In spite of the overall rise in admissions the maternal deaths have decreased as compared with 1954, due largely to the fact that more of them attend antenatal clinics.

The Venereal Diseases Clinic, which is still situated in the hospital grounds, provides valuable assistance with the examination and treatment of patients.

A staff nurses' sitting room was provided during the year but unfortunately it gets very little use.



The water supply to the hospital and nurses home still remains poor and there is usually no running water during day light hours.

### Mothers.

The number of admissions has increased — more especially towards the end of the year. The number of abnormal deliveries has decreased compared with 1954. The number of operations performed has greatly increased and so has the number of live births. Still-births, however, are slightly less than last year. Generally the personal cleanliness of the mothers leaves much to be desired, as does the condition of their babies when seen at the postnatal clinic despite teaching by the nurses.

### Babies

The average weight remains about the same as in 1954 viz.: 6½—7 lbs. Although there has been an increase in the premature birth rate a number have been successfully reared, due to efficient nursing care.

## Hospital Statistics

				1954	1955
Total Admissions	...	...	...	2,148	3,013
Births	...	...	...	1,618	2,371
Still-births	...	...	...	144	141
Maternal Deaths	...	...	...	16	10
Infant Deaths	...	...	...	99	197
Operations	...	...	...	23	88
Born Before Arrival	...	...	...	107	167
Abnormal Presentations	...	...	...	146	111
Twins	...	...	...	33	58
Triplets	...	...	...		2

### Ante-natal Clinics

Number of clinics held	...	...	...	207	206
Attendances	...	...	...	11,110	13,980

### Post-natal Clinics

Number of clinics held	...	...	...	46	49
Attendances	...	...	...	352	689
Patients in Hospital on first day of year	...	...	...	32	39

### Admissions :

Resident	...	...	...	1,652	2,337
Non-resident	...	...	...	496	676
Total	...	...	...	2,148	3,013

### Discharges

				1954	1955
Patients in Hospital on last day of year	...	...	...	2,052	2,994
Patient Days	...	...	...	35	38
Baby Days	...	...	...	12,428	17,983
Motherless Baby Days	...	...	...	9,561	14,096
	...	...	...	1,967	1,172

## Admission by Districts

Nairobi	2337	Karen	24	Mbagathi	6
Athi River	18	Karuru	5	Mombasa	1
Dagoretti	24	Kiambu	26	Nakuru	2
Dandora	9	Kijabe	4	Narok	1
Embakasi	26	Kisumu	2	Naivasha	1
Fort Hall	1	Langata	24	Ngong	90
Juja	7	Limuru	7	Ruaraka	57
Kabete	263	Longonot	1	Ruiru	12
Kahawa	45	Machakos	5	Thika	9
Kajiado	2	Maguga	2	Uplands	2

## Admission by Tribes

			Clinic	Direct	Total
Kikuyu	...	...	795	152	947
Jaluo	...	...	740	113	853
Other Tribes	...	...	963	250	1,213

## Statistics, Clinic and Non-clinic

			Clinic	Direct	Total
Births	...	...	2,056	315	2,371
Still-births	...	...	121	20	141
Born Before Arrival			117	50	167
Malpresentations	...		93	18	118
Twins	...	...	45	13	58

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## Still-births and Causes

			Clinic	Direct	Total
Anecephalic	...	...	2	1	3
Atelectasis	...	...	2	—	2
Birth injuries	...	...	1	—	1
Breech delivery	...		1	—	1
Cause unknown	...		5	—	5
Congenital syphilis	...		9	—	9
Death in utero due to					
anaemia	...	...	1	2	3
Death in uterus	...		16	2	18
Delayed labour	...		25	7	32
Eclampsia	...	...	3	—	3
Heart failure	...		1	1	2
Hydrocephalic	...		6	—	6
Macerated foetus	...		10	2	12
Meningocele	...		1	—	1
Obstructed labour	...		10	—	10
Placenta praevia	...		1	—	1
Prematurity	...		21	4	25
Prolapsed cord	...		5	1	6
Toxaemia of pregnancy			1	—	1
			121	20	141

## Infant Deaths and Causes

	Clinic	Direct	Total
Atelectasis ... ..	11	—	11
Birth injuries ... ..	4	1	5
Cause unknown ... ..	5	—	5
Cerebral haemorrhage	5	1	6
Cerebral injury ... ..	8	3	11
Congenital heart ... ..	7	—	7
Congenital syphilis ...	9	2	11
Enteritis ... ..	2	1	3
Haematemesis ... ..	—	1	1
Haemoptysis Rhesus neg:	1	—	1
Heart failure ... ..	1	—	1
Heart failure with			
pneumonia ... ..	4	—	4
Marasmus ... ..	1	4	5
Prematurity ... ..	80	40	120
Scleroderma neonatorum	2	1	3
Toxaemia of pregnancy	—	1	1
Tuberculosis of mother	1	1	2
	<hr/> 141	<hr/> 56	<hr/> 197

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## Maternal Death and Causes

Anaemia ... ..	3	1	4
Meningitis ... ..	—	1	1
Post partum shock ...	1	2	3
Ruptured uterus ... ..	2	—	2
	<hr/> 6	<hr/> 4	<hr/> 10

## Operations

	Clinic	Direct	Total
Artificial rupture of			
membranes ... ..	6	4	10
Caesarean sections ...	33	3	36
Curettage ... ..	3	3	6
Forceps ... ..	22	4	26
Perforation ... ..	1	—	1
Removal of placenta ...	5	2	7
Repair of uterus ... ..	—	2	2
	<hr/> 70	<hr/> 18	<hr/> 88



## Clinics

### Ante-natal :

Number held	...	...	206	
New cases, Resident	...	...	...	2,617
New cases, Non-resident	...	...	...	1,797
Repeats, Resident	...	...	...	5,844
Repeats, Non-resident	...	...	...	3,722
				<hr/>
				13,980
				<hr/>

### Post-natal :

Number held	...	...	...	49	
Resident	...	...	...	...	513
Non-resident	...	...	...	...	176
					<hr/>
					689
					<hr/>
Total Abnormal Cases Treated	...	...	...	...	484

**VENEREAL DISEASES CLINIC**

The work of the clinic was continued in the building in the grounds of the African Maternity Hospital. Improvements to this building, begun in 1954, were completed in 1955, and made working conditions better than they had been since the Department moved there in April 1952, but even so the building is still unsuitable for carrying out the work of a venereal diseases clinic. The Medical Officer and her staff, however, tried to make the best of the place, in anticipation of a new clinic which was to be built "next year".

The total attendance for the year was 26,371, an increase of nearly 8,000 over the previous year. This was the highest number to attend the clinic in any year since it was opened in 1942. Of this number (26,371) 17,315 visits were paid by patients with venereal disease. The average attendance per day in 1955 of 104 was the highest average in any year. The total number of cases seen at the clinic in 1955 was 4,974, the greatest number to attend in any year. Of this number 2,245 were cases of venereal disease.

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The table shows that a larger number of patients with venereal disease attended the clinic in 1949 and 1950 than in 1955, but the number of visits paid by venereal disease cases was almost stationary (around 17,800) during these two years. When more patients requiring treatment attended the clinic, a larger number of visits by such patients should have been recorded. This was possibly in large part due to the policy, begun in 1949, of introducing payment for treatment at the clinic. This policy was adopted in spite of strong protests, the venereal diseases clinic in Nairobi being the only one in the world, as far as is known, where such a policy applies. Internationally the treatment of venereal disease is regarded as a necessary insurance for the whole population.

The result of this policy was that in many cases patients with venereal disease could not be treated because they could not pay, and that many patients who had begun to have a course of treatment ceased to attend. As a result of protests the payment policy was relaxed first for pregnant women (but not for women who had just had a baby) and then for babies (but not for their mothers). When it was pointed out that mothers could re-infect their babies, it was decided that all mothers and babies should be treated free. Again, ayahs were not entitled to free treatment unless they could produce a poll tax receipt, paid in Nairobi, during the year in question. This rule was ultimately relaxed. The result has been that what was a troublesome restriction of the work at the clinic became relaxed from

time to time, so that a relatively small number of women with venereal disease have to pay for treatment now. Even so, among these women, a delay of several weeks may occur before they return for treatment with the money which they have been told to bring and during this interval, they have been able to spread the infection.

The income which has been paid for treatment amounts to approximately £50 a year. It is therefore urgent in the interests of public health (and in view of the low income) that this payment system be abolished.

## SYPHILIS

### Analysis of 708 cases of syphilis seen in 1955, compared with 641 cases seen in 1954.

Table A		1955	1954
Group 1.	Cases who received no treatment at all ...	30	21
Group 2.	Cases given a complete course of treatment before 1955, who attended for "follow-up" only ...	59	39
Group 3.	Cases whose treatment was begun in 1955 and continued in 1956 ...	63	105
Group 4.	Cases whose treatment was begun in 1954 and continued in 1955 ...	102	79
	(a) 65 completed their treatment in 1955 ...		(52)
	(b) 37 defaulted in 1955 without completing their treatment ...		(27)
Group 5.	Cases treated with penicillin only ...	21	23
Group 6.	Cases treated with a complete course of		
	(a) penicillin and bismuth ...	75	—
	or (b) penicillin, arsenic and bismuth ...	91	100
Group 7.	Cases who defaulted during treatment ...	267	274
	Totals:	708	641

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The cases who completed their treatment during 1955 consisted of these groups:—

4 (a)	65
5	21
6 (a)	75
6 (b)	91
Total	252

The number of cases of syphilis which attended the clinic in 1955 — 708 — was an increase on the number seen in 1954. There was also an increase in the number of cases of acute infectious syphilis as shown in Table "A". A small number were treated with pencillin only, the minimum dose recommended by the World Health Organisation (4.8 mega units) being prescribed. More patients were given a course of pencillin and bismuth and others the combined course of pencillin, arsenic and bismuth — the treatment prescribed being that which was considered most suitable for the particular case. On account of these different courses of treatment, no average number of injections per case has been worked out, but the average number of visits paid to the clinic by each patient with syphilis was 11.

The analysis made of the 708 cases of syphilis seen in 1955 shows that 30 cases (4%) had no treatment at all and 59 cases (8.3%) attended for follow-up only. The remaining cases, 619, attended for treatment during the year, 63 of them continuing their treatment in 1956. Of the balance of 556 patients treated in 1955, 252 (45%) completed their treatment. This was a great improvement on the number (27%) who completed their treatment in 1954. During the year, 39 cases were discharged after adequate "follow-up".

## GONORRHOEA

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The number of cases of gonorrhoea attending the clinic in 1955 was 1,534, an increase of nearly 200 cases over the 1954 figure. These patients paid 9,455 visits to the clinic, an average of 6 visits per patient.

The following table is an analysis of these 1,534 cases, compared with the 1348 cases in 1954.

	1955	1954
1. Cases who received no treatment ...	22	32
2. Cases treated in 1955 who attended for "follow-up" in 1956 ...	85	94
3. Cases treated and discharged cured	447	265
4. Cases who defaulted before being discharged cured ...	738	724
5. Cases treated in 1955 who were re-admitted with a new infection ...	242	233
Total	1,534	1,348

Of the cases in groups 3 and 4, which total 1,185, 38% were discharged as cured, a marked improvement over the comparable figure of 27% in 1954.



## Gonorrhoea in pregnant women

Gonorrhoea is a serious complication in pregnancy, not only leading to abortion in early pregnancy, but causing much ill health in the women, who may have several relapses of the disease during the course of their pregnancies. They are also very subject to a relapse of the disease after delivery. During the year 2,527 pregnant women were examined, and 999 of them were found to be suffering from venereal diseases (39.5%). Of the 999 cases of venereal disease, 642 were cases of gonorrhoea — that is 64% of all cases of venereal disease in pregnant women was gonorrhoea.

## Gonococcal conjunctivitis

The risk of gonococcal conjunctivitis in the babies of mothers with gonorrhoea is high. During the year the following number of cases were treated:—

1. Cases of gonococcal conjunctivitis ... 180
2. Cases occurring in infants under 3 weeks  
of age ... 137 (76% of 1)
3. Number of the latter who ceased to attend  
before being cured ... 88 (63% of 2)

Soft chancre and Lymphogranuloma venereum. Two cases of soft chancre and one case of lymphogranuloma venereum were treated during the year.

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## Other cases—not venereal disease

During 1955, 2,729 patients attended the clinic for examination, who were found not to be suffering from venereal disease.

Of this number — 1950 were discharged

717 defaulted

62 continued to attend in 1956

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Total	2,729
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## Pregnant women

The number of pregnant women who attended the clinic in 1955, was 2,527, 50% of the total attendance of 4,974 and an increase of 459 over the number in 1954.

The following table gives the number who attended each year since 1952, the percentage which they formed of the total number of cases, the number suffering from venereal disease and the percentage affected.

TABLE SHOWING ATTENDANCES SINCE 1943

	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
Total attendance	8,720	8,320	11,221	13,098	20,605	24,397	22,366	21,658	23,141	19,995	19,724	18,680	26,371
Attendance of V.D. cases	6,434	6,208	8,416	9,635	13,871	17,745	17,889	17,757	18,421	14,756	13,475	12,283	17,315
Total cases	1,255	1,273	1,974	2,578	4,443	4,822	4,204	4,022	3,396	3,159	3,645	4,146	4,974
Cases of V.D.	625	629	887	1,216	1,763	2,045	2,458	2,782	2,197	1,983	2,015	1,995	2,245
Average attendance per day	34	33	45	52	81	96	88	86	92	81	78	74	104

	1952	1953	1954	1955
Number of pregnant women	1,099	1,503	2,668	2,527
Percentage of total number of cases	35%	41%	50%	50%
Total number suffering from venereal disease	734	754	920	999
Percentage affected	67%	50%	40%	39.5%

It will be seen that the number of pregnant women attending the venereal diseases clinic has more than doubled in the last four years, and that the percentage which they form of the total number of cases has increased from 35% to 50%. At the same time, although the number found suffering from venereal disease has increased by over 250 cases, the percentage affected has decreased.

### Ayahs and Home Visits

The examination of ayahs and details about home visits are given in the tables attached.

## Statistics—Venereal Diseases Clinics, 1955

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### 1. Attendances

	1953	1954	1955
Total attendance for the year	19,724	18,680	26,371
Number of clinics	252	253	253
Average attendance per day	78	74	104

### 2. Consultations

	1953	1954	1955
By patients with syphilis	6,527	5,724	7,827
By patients with gonorrhoea	6,918	6,418	9,455
By patients with soft- chancre	30	141	16
By patients with lympho- granuloma venereum	—	—	17
Total by patients with venereal diseases	13,475	12,283	17,315
By other patients (not venereal diseases)	6,429	6,397	9,056
Total consultations	19,724	18,680	26,371

### 3. Analysis of cases

	1953	1954	1955
Number of cases of:—			
<b>Syphilis</b>			
Primary	101	61	65
Secondary	350	159	170
	<hr/>	<hr/>	<hr/>
Total acute syphilis	406	220	235
Latent	283	344	399
Tertiary	2	1	—
Congenital	53	76	74
	<hr/>	<hr/>	<hr/>
Total syphilis	744	641	708
<b>Gonorrhoea</b>	1,269	1,348	1,534
<b>Soft Chancre</b>	2	2	2
<b>Lymphogranuloma venereum</b>	—	—	1
	<hr/>	<hr/>	<hr/>
Total cases of venereal diseases	2,015	1,995	2,245
Other cases (not venereal diseases)	1,630	2,151	2,729
	<hr/>	<hr/>	<hr/>
Total cases	3,645	4,146	4,974
	<hr/>	<hr/>	<hr/>

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### 4. Injections given

	1954	1955
Intravenous N.A.B.	3,228	2,294
Intramuscular bismuth and acetylarsan	3,644	4,000
Pencillin	3,077	5,729
	<hr/>	<hr/>
Totals	9,949	12,023
	<hr/>	<hr/>

Pencillin: 3,989 pencillin injections were given to cases of gonorrhoea and 1,776 to syphilitic cases.

### 5. Specimens for Kahn test

Total taken	Positive	Doubtful	Negative
7,107	1,288	547	5,272

The average number of Kahns taken per clinic was 28.



## 6. Smears for gonococcal examination

During the year 17,881 smears were taken for examination. This averaged 70 per clinic. The results of the examination of these smears were as follows:—

Smears from urethra	8,730	Number positive	30
„ „ cervix	8,453	„ „	251
„ „ vagina	255	„ „	19
„ „ eye	443	„ „	27
Total smears taken	17,881	Total positive	327

## 7. Home visits

These visits were begun again in April 1955. The total number of visits paid was 1,097; on 529 occasions the patient was contacted and 277 return visits were paid to the clinic after these contacts. Although contact was made during only 48% of the visits, of these contacted 52% returned to the clinic, making these visits very worth while.

## 8. Ayahs

The number of ayahs referred for examination was 198.

Those with syphilis	42	
Those with gonorrhoea	27	
	<hr/>	
Total with venereal diseases	69	(35%)
Total negative	129	
	<hr/>	
Total examined	198	
	<hr/>	

## SECTION 16

### STAFF CLINIC AND INOCULATION CENTRE

#### Staff Clinic

The figures for 1955 are:—

Total attendances	15,705	Fit for duty	12,103
Total new cases	6,224	Unfit for duty	5,788
Average daily African staff	...	...	2,800
Daily attendance rate	...	...	1.839%
Daily off duty rate	...	...	0.678%

The principal complaints were:—

	1954		1955	
	No. cases	% new cases	No. cases	% new cases
Respiratory Diseases	1,214	23%	1,539	24%
Wounds	1,176	22%	1,214	19%
Abdominal	595	11%	852	13%
Influenza	607	12%	808	12%

#### Inoculation Centre

#### Inoculations and Vaccinations, 1955

	Europeans	Asians	Africans	Total
Smallpox	... 6,063	9,014	1,888	16,965
Yellow fever	... 5,308	8,455	249	14,012
T.A.B.	... 1,022	982	11,713	13,717
Cholera	... 400	2,945	12	3,357
Diphtheria	... 99	12	14	125
Diphtheria/Pertussis	... 172	18	—	190
Whooping cough	... 22	96	12	130
Plague	... —	—	14	—
Totals	... 13,086	21,522	13,902	48,610

**HEALTH EXHIBITION, MEMORIAL HALL****22nd to 26th November, 1955**

The department has been endeavouring to promote the health education side of its work for some time. To this end a health exhibition was organised and held in November.

No financial assistance was obtainable from Council and so it was necessary to enlist the cooperation of private enterprise, to whom stalls were let at a charge which would cover all expenses. We received excellent support from many private firms in town and herewith express our deep gratitude to them for assisting us in our first effort to put "health" across to the citizens of Nairobi. Without the help of private enterprise we would have had no exhibition.

The work of all sections of the department was exhibited. This meant no small amount of work for the staff of all sections who worked enthusiastically and without complaint.

In addition to the stall exhibits a programme of events was arranged as under.

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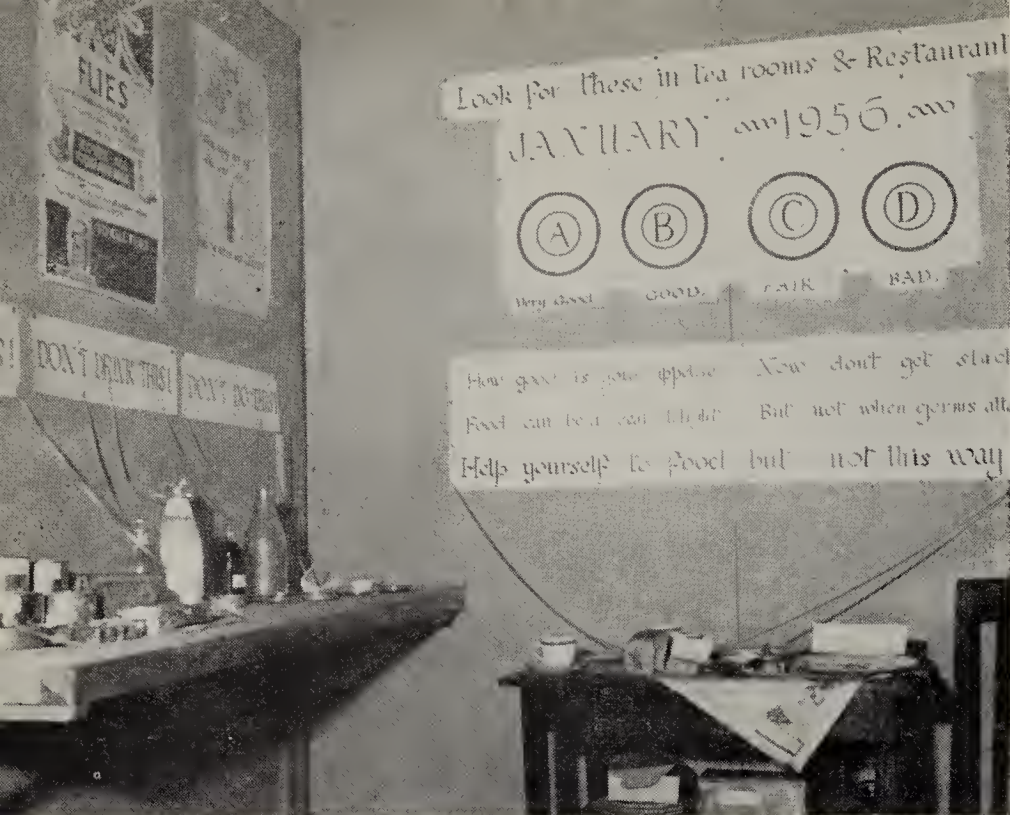
**Tuesday, 22nd November, 1955:**

- 11.00 a.m. Official opening by His Worship the Mayor of Nairobi, Alderman I. Somen, M.B.E.
- 3.00 p.m. Cookery demonstration.
- 4.00 p.m. Demonstration of Scottish dancing by pupils of Westlands European Primary School.
- 5.15 p.m. Talk by Dr. Calcott, "Care of the Eyes".
- 6.15 p.m. Films:
  - "Your children and You".
  - "Your children's Teeth".
  - "The Nose has it".

**Wednesday, 23rd November, 1955:**

- 11.00 a.m. Cookery demonstration.
- 3.00 p.m. Cookery demonstration — Invalid food.
- 4.00 p.m. Display of singing games by pupils of African Nursery School, Nairobi.
- 5.15 p.m. Talk by A. R. Vickers, Esq., "Care of the Teeth".
- 6.15 p.m. Films:
  - "Annabella comes to Town".
  - "Your children's Eyes".
  - "Calories".





*Protection of food.*

**Thursday, 24th November, 1955:**

- 11.00 a.m. Cookery demonstration.
- 3.00 p.m. Cookery demonstration.
- 4.00 p.m. Display of physical training by pupils of St. Georges European Primary School.
- 5.15 p.m. Talk by Dr. McAllan, "Care of the Figure".
- 6.15 p.m. Films: "Your children's Ears".  
"Body builders".  
"Good housewife in the kitchen".  
"The Nose has it".

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**Friday, 25th November, 1955:**

- 11.00 a.m. Cookery demonstration.
- 3.00 p.m. Cookery demonstration — Invalid foods.
- 4.00 p.m. Display of physical training exercises by pupils of the Nairobi European Primary School.
- 5.15 p.m. Talk by Dr. Piers. "Care of the skin".
- 6.15 p.m. Films: "Your children's teeth".  
"Tremendous trifles".  
"Another case of poisoning".



*The wrong way.*



Maternity & Child Welfare Exhibit.



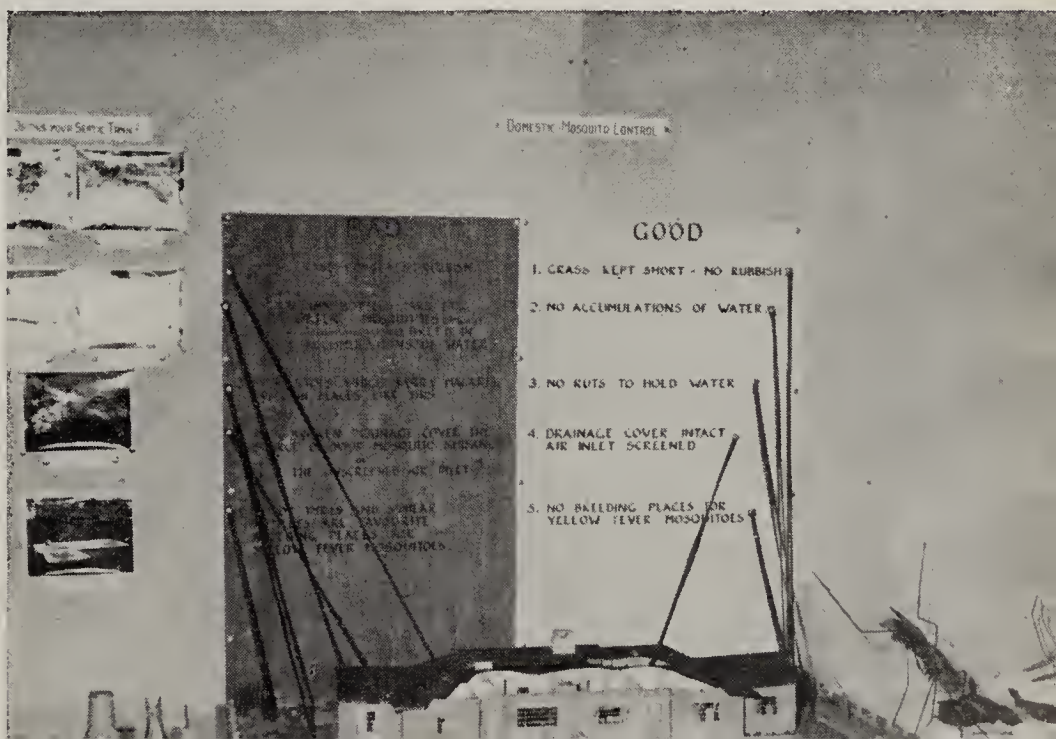
**Saturday, 26th November, 1955:**

- 11.00 a.m. Cookery demonstration.
- 3.00 p.m. Cookery demonstration.
- 3.00 p.m. Display of Indian classical and folk dances by pupils of the Duchess of Gloucester Girls School.
- 5.15 p.m. Talk by T. McAlpine, Esq., "Care of the feet".
- 6.15 p.m. Films: "Your children's eyes".  
"Uncle explains".  
"The nose has it".

The value of such an exhibition is difficult to estimate. Many people come out of curiosity and without a desire to absorb information. On the whole, however, it was felt that the exhibition had been a success — sufficiently, at least, to encourage the department to give thought to holding more in the future, and sufficient it is hoped to make our many outside helpers feel that their efforts had been worthwhile.

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Pest Control.



# SECTION 18

## SCHEDULE OF STAFF

Post	Name of Officer	Established Non-Established Temporary
Medical Officer of Health	A. T. G. Thomas, M.D., B.S., D.P.H.	. . E
Deputy M.O.H.	J. W. McAllan, M.B., Ch.B., D.P.H.	. . E

### Staff and Inoculation Clinic :

Assistant Medical Officer	F. S. Gillespie, M.B., B.Ch., B.A.O.	. . T
Sister Storekeeper	Mrs. J. Young, S.R.N., T.A. Cert.	. . E

### Sanitary Inspection :

Senior Sanitary Inspector	Mr. R. C. Forster, M.B.E., Cert. R.S.I., and Meat Cert., San., Sc.	. . . . E
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#### Sanitary Inspectors (European)

Mr. D. Mackintosh, Cert., R.S.A.S.	. . . E
Mr. S. White, Cert., R.S.I.	. . . E
Mr. A. Ramshaw, Cert., R.S.I. and Meat	. . E
Mr. H. T. Beechey, Cert., R.S.I., and Meat, Dip. R.I.P.H.H. (Hons.)	. . . E
Mr. K. E. Kendray, Cert., R.S.I. and Meat	. . E
Mr. S. Daley, Cert., R.S.I. and Meat	. . E
Mr. G. B. Ashford, Cert., R.A.S. (Scotland) Meat and Food Cert.	. . . E
Mr. J. Knowles, R.S.I., S.I., E.J.B. Cert., Meat and Food Cert.	. . . . E

#### Sanitary Inspectors (Asian)

Mr. R. D. Belsare, Cert., R.S.I. (India) and Meat Cert., (Eng.) Cert., Trop., Hy.	. . . E
Mr. Mohd. Din, Cert., R.S.I. (India)	. . . E

#### Sanitary Inspectors (African)

Mr. N. Mimano, Cert., R.S.I. (E.A.)	. . . E
Mr. T. L. O. Muganda, Cert., R.S.I. (E.A.)	. . E
Mr. J. A. Ngaruiya, Cert., R.S.I. (E.A.)	. . E
Mr. W. G. K. Nyawade, Cert., R.S.I. (E.A.)	. . E

Post	Name of Office	Established Non-Established Temporary
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#### Department Clerical Staff :

Secretary	Mrs. A. M. Alexander . . . . .	E
Clerk/Typists	Mrs. D. I. Butcher . . . . .	N.E.
	Mrs. S. Powell . . . . .	N.E.
	Mrs. M. Waller . . . . .	T

#### Infectious Diseases Control Department :

Infectious Diseases Officer	Mr. J. Morrill . . . . .	E
Mosquito Inspectors	Mr. A. Gocs . . . . .	E
	Mr. M. I. Shah, Cert., R.S.I. (India) . . . . .	E
	Mr. Y. Ahmed . . . . .	E
Rodent Officer	Mr. L. H. Clough . . . . .	E
Assistant Rodent and Vermin Overseer	Mr. J. Karebe . . . . .	E
Clerk/Typist	Mrs. G. H. Millership . . . . .	E
Laboratory Technicians	Mr. W. Ongare . . . . .	
	Mr. S. Otieno . . . . .	

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#### European Child Welfare :

Medical Officer	Dr. P. Gaffikin, M.B., Ch.B. . . . .	E
Health Visitor	Mrs. E. M. Sullivan, S.R.N. , . . . .	E



Post	Name of Officer	Established	Non-Established	Temporary
<b>Parklands Day Nursery :</b>				
Matron	Mrs. I. B. J. Ross-Whyte			
	Princess Louise Children's Nurse	.	.	E
	Mrs. P. J. Dickson, Child Welfare,			
	Nursery Teacher's Cert.	.	.	T
	Mrs. J. Rushworth	.	.	T
	Mrs. K. Sharpe	.	.	T
	Mrs. C. Mitchell	.	.	T
	Mrs. L. Somen	.	.	T
<b>Woodley Day Nursery :</b>				
Matron	Mrs. Thornton	.	.	T
	Mrs. G. Whipp	.	.	T
	Mrs. Burnett	.	.	T
	Mrs. L. Simpson	.	.	T
	Mrs. I. Simpson	.	.	T
<b>African Maternity and Child Welfare :</b>				
Medical Officer	Dr. J. A. T. Henry, M.B.E., M.B., Ch.B.,	.	.	
	D.T.M. and H.	.	.	E
	Dr. V. R. Hume (Part Year)	.	.	T
Supervisor of Health				
Visitors	Mrs. E. Dugmore, S.R.N., S.C.M.	.	.	E
Health				
Visitors	Mrs. A. G. Gibb, S.C.M.	.	.	E
	Mrs. B. J. Brooks, S.R.N., S.C.M.	.	.	E
	Mrs. C. M. Davis, S.R.N., S.C.M., H.V. Cert.	.	.	E
	Mrs. M. Taylor, S.R.N., S.C.M.	.	.	E
	Miss J. Koppert, S.R.N., S.C.M.	.	.	E
	Mrs. N. Rasmussen, S.R.N., S.C.M.	.	.	T
	Mrs. D.M. Burgess, S.R.N., S.C.M., H.V. Cert	.	.	T
	Mrs. H. M. Hardy, S.R.N., S.C.M., H.V. Cert.	.	.	T
	Miss P. J. Fisher, S.R.N., S.C.M., H.V. Cert.,	.	.	E
<b>Venereal Diseases Clinic :</b>				
Medical Officer	Dr. L. O. Hunter, M.R.C.S., (Eng.)	.	.	E
European Sisters				
	Mrs. V. A. Hook, S.R.N., S.C.M.	.	.	E
	Mrs. M. M. Bracken, S.R.N., S.C.M.	.	.	E



Post	Name of Officer	Established Non-Established Temporary
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#### Lady Grigg African Maternity Hospital :

Medical Superintendent	Dr. P. M. Anderson . . . . .	E
Matron	Miss K. M. Foord, M.B.E., S.R.N., S.C.M. . . . .	E
European Sisters	Miss S. T. Wenzel, S.C.M. . . . .	E
	Mrs. B. O'Shea, S.R.N., S.C.M. . . . .	E
	Mrs. P. Welford, S.R.N., S.C.M. . . . .	
	Mrs. E. Packman, S.R.N., S.C.M. . . . .	
	Miss L. J. Vaux, S.R.N., C.M.B. . . . .	

#### Indian Maternity and Child Welfare :

Medical Officer	Dr. P. Gaffikin, M.B., Ch.B. . . . .	E
Assistant Medical Officer	Dr. V. R. Hume (Part Year) . . . . .	
Health Visitors	Mrs. M. R. Pachecos, S.R.N. (Karachi) H.V. (Kenya)	
	Mrs. N. Nayer, H.V., (Kenya) . . . . .	E
	Miss F. da Cruz, H.V., (Kenya) . . . . .	N.E.
	Mrs. M. Sandhu, H.V., (Kenya) . . . . .	E
Clerk/ Interpreter	Miss D. K. Sehmi . . . . .	E

#### High Ridge Day Nursery :

Matron	Mrs. H. R. Hobden, S.R.N., S.C.M. . . . .	E
Assistants	Mrs. E. H. Johannes, Teacher's Diploma and Domes- tic Science Diploma (Lebanon) . . . . .	E
	Mrs. S. L. Puri . . . . .	T

# SECTION 19

## REVENUE ACCOUNT FOR THE PUBLIC HEALTH

### EXPENDITURE

#### Public Health Administration :

	£ s. cts.	£ s. cts.
<b>Employees —</b>		
Salaries . . . . .	20,444 19 52	
Salary Arrears—1954 . . . . .	2,880 16 92	
Special Temporary Allowances . . . . .	2,864 13 33	
Housing Allowances . . . . .	368 5 86	
Superannuation Charges . . . . .	2,308 9 26	
Provident Fund Contributions . . . . .	127 4 90	
Passages Reserve Contribution . . . . .	805 0 00	
Medical Benefits . . . . .	195 14 10	
Wages etc.,—African Staff . . . . .	561 2 76	
Passages—New Appointments . . . . .	189 14 25	
	<hr/>	30,746 0 90
<b>Running Expenses —</b>		
TRANSPORT		
Locomotion . . . . .	1,170 17 66	
<b>Establishment Expenses</b>		
Printing, Stationery and Advertising . . . . .	494 16 04	
Printing Report . . . . .	246 17 00	
Postages . . . . .	205 8 07	
Telephone . . . . .	272 10 68	
Insurances . . . . .	657 0 00	
Uniforms . . . . .	36 17 92	
Rent of Offices . . . . .	1,615 17 23	
Central Establishment Charges . . . . .	6,360 0 00	
<b>Miscellaneous</b>		
Food and Drug Analysis . . . . .	126 8 96	
Food and Meat Inspection. . . . .	22 1 80	
Public Health Propaganda . . . . .	553 16 15	
Demolition of Buildings . . . . .	31 7 41	
Other Expenses . . . . .	5 14 89	
	<hr/>	11,799 13 81
		<hr/>
		42,545 14 71
<i>Less : Charged to Staff Clinic and Inoculation Centre .</i>		200 0 00
		<hr/>
<i>Carried forward . . . . .</i>		42,345 14 71

# **YEAR ENDED 31st DECEMBER 1955**

## **DEPARTMENT**

### **I N C O M E**

#### **Public Health Administration :**

	£ s. cts.	£ s. cts.
Government Grant . . . . .	72,680 2 25	
Fees—Food and Drug Analysis . . . . .	46 3 50	
Poultry Inspection . . . . .	462 15 39	
Other Income . . . . .	14 4 00	
	<hr/>	73,203 5 14

<i>Carried forward</i> . . . . .	<hr/>	73,203 5 14
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## EXPENDITURE

### Infectious Diseases Prevention :

	£	s.	cts.	£	s.	cts.
<i>Brought forward</i> . . . . .				42,345	14	71
<b>Employees—</b>						
Salaries . . . . .	5,652	14	80			
Salary Arrears—1954 . . . . .	876	19	61			
Special Temporary Allowances . . . . .	759	8	72			
Housing Allowances . . . . .	193	11	72			
Superannuation Charges . . . . .	533	4	44			
Provident Fund Contributions . . . . .	57	6	25			
Medical Benefits . . . . .	96	10	32			
Wages etc.,—African Staff . . . . .	12,883	12	94			
				21,053	8	80
<b>Running Expenses—</b>						
<b>PREMISES</b>						
Maintenance of Buildings . . . . .	29	15	13			
<b>Supplies, Equipment etc.</b>						
Stores and Materials . . . . .	3,153	18	69			
Laboratory Equipment . . . . .	68	3	82			
Uniforms . . . . .	460	3	04			
<b>Transport</b>						
Locomotion . . . . .	916	16	73			
T.I.F.A. Unit . . . . .	949	7	66			
Other Transport . . . . .	2,951	12	81			
<b>Establishment Expenses</b>						
Printing, Stationery and Advertising . . . . .	408	14	07			
Telephone . . . . .	44	5	13			
Rent of Offices . . . . .	519	0	34			
<b>Miscellaneous</b>						
Hospital Fees . . . . .	4,024	16	00			
Notification Fees . . . . .	439	9	00			
Other Expenses . . . . .	1	3	75			
				13,967	6	17
 <i>Carried forward</i> . . . . .				77,366	9	68



## I N C O M E

### Infectious Diseases Prevention :

	£	s.	cts.	£	s.	cts.
<i>Brought forward</i> . . . . .				73,203	5	14
Vermin and Rodent Destruction . . . . .	3,375	18	45			
Malaria Control . . . . .	200	0	00			
Training Course Expenses Refunded . . . . .	25	13	70			
	<hr/>			3,601	12	15

<i>Carried forward</i> . . . . .	<hr/> 76,804 17 29
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## EXPENDITURE

### Staff Clinic and Inoculation Centre :

	£ s. cts.	£ s. cts.
<i>Brought Forward</i> . . . . .		77,366 9 68
<b>Employees—</b>		
Salaries . . . . .	1,624 18 75	
Salary Arrears—1954 . . . . .	181 15 19	
Special Temporary Allowances . . . . .	307 0 70	
Superannuation Charges . . . . .	55 5 37	
Wages etc.,—African Staff . . . . .	1,260 3 80	
	<hr/>	3,429 3 81
<b>Running Expenses—</b>		
Electricity . . . . .	47 1 50	
<b>Supplies, Equipment, etc.</b>		
Medical Stores and Equipment . . . . .	542 17 71	
Uniforms . . . . .	5 15 08	
Laundry . . . . .	35 12 00	
<b>Transport</b>		
Locomotion . . . . .	25 7 50	
Other Transport . . . . .	19 65	
<b>Establishment Expenses</b>		
Printing, Stationery and Advertising . . . . .	38 2 85	
Telephone . . . . .	22 2 57	
Rent of Offices . . . . .	720 0 01	
Departmental Establishment Charges . . . . .	200 0 00	
Other Expenses . . . . .	4 50	
	<hr/>	1,638 3 37
 <i>Carried forward</i> . . . . .		<hr/> 82,433 16 86

## INCOME

### Staff Clinic and Inoculation Centre :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		76,804 17 29
Government Contribution for Inoculation . . . . .	900 0 00	
Vaccination and Inoculation Fees . . . . .	112 0 00	
	<hr/>	1,012 0 00

<i>Carried forward</i> . . . . .	<hr/>	77,816 17 29
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## EXPENDITURE

### Veneral Diseases Treatment :

	£	s. cts.	£	s. cts.
<i>Brought forward</i> . . . . .			82,433	16 86
<b>Employees—</b>				
Salaries . . . . .	2,861	9 88		
Salary Arrears—1954 . . . . .	343	7 82		
Special Temporary Allowances . . . . .	414	9 92		
Superannuation Charges . . . . .	146	5 95		
Provident Fund Contributions . . . . .	109	10 00		
Passages Reserve Contribution . . . . .	115	0 00		
Medical Benefits . . . . .	20	0 89		
Wages etc.,—African Staff . . . . .	1,052	15 77		
			5,063	0 23
<b>Running Expenses—</b>				
<b>PREMISES</b>				
Maintenance of Buildings . . . . .	32	0 58		
<b>Supplies, Equipment, etc.</b>				
Medical Stores and Equipment . . . . .	618	13 72		
Uniforms . . . . .	36	17 89		
<b>Transport</b>				
Locomotion . . . . .	47	12 91		
<b>Establishment Expenses</b>				
Printing, Stationery and Advertising . . . . .	60	2 95		
Rent . . . . .	360	0 00		
Other Expenses . . . . .	3	15 00		
			1,159	3 05
 <i>Carried forward</i> . . . . .			88,656	0 14



## INCOME

### Veneral Diseases Treatment :

									£	s.	cts.	£	s.	cts.
												77,816	17	29
Brought forward														
Fees	.	.	.	.	.	.	.	.	64	2	00			
Rent	.	.	.	.	.	.	.	.	72	0	00			
									<u>          </u>			136	2	00

<i>Carried forward</i>	.	.	.	.	.	.	77,952 19 29
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## EXPENDITURE

### Day Nurseries :

<i>Brought forward</i>	£ s. cts.	£ s. cts.
		88,656 0 14
<b>European—Parklands</b>		
EMPLOYEES—		
Salaries	2,359 10 48	
Salary Arrears—1954	94 7 20	
Special Temporary Allowances	558 5 07	
Superannuation Charges	59 16 99	
Passages Reserve Contribution	55 0 00	
Medical Benefits	6 13 63	
Wages etc.,—African Staff	288 7 22	
	<hr/>	3,422 0 59
<b>Running Expenses—</b>		
PREMISES		
Maintenance of Buildings and Grounds	171 9 93	
Electricity and Fuel	206 0 74	
Water and Conservancy	38 16 25	
Cleaning Materials	73 12 30	
Rates	100 0 00	
Renewals Reserve Contribution	75 0 00	
<b>Supplies, Equipment etc.</b>		
Maintenance of Equipment, etc.	193 1 30	
Provisions	806 18 51	
Uniforms	54 11 77	
<b>Establishment Expenses—</b>		
Printing, Stationery and Advertising	9 14 31	
Telephone	22 0 60	
Insurances	6 15 00	
<b>Miscellaneous</b>		
Loans Fund Expenses	7 0 65	
Other Expenses	4 10 50	
	<hr/>	1,769 11 86
<b>Loan Charges—</b>		
Principal	120 7 23	
Interest	120 9 60	
	<hr/>	240 16 83
<b>Revenue Contributions to Capital Outlay—</b>		
Alterations and Extensions		500 0 00
<i>Carried forward</i>		<hr/> 94,588 9 42

I N C O M E

Day Nurseries :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		77,952 19 29
<b>European—Parklands</b>		
Fees . . . . .		5,410 1 00

<i>Carried forward</i> . . . . .	<hr/> 83,363 0 29
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## EXPENDITURE

### Day Nurseries—(Continued) :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		94,588 9 42
<b>European—Woodley</b>		
EMPLOYEES—		
Salaries . . . . .	2,867 10 79	
Salary Arrears—1954 . . . . .	96 0 92	
Special Temporary Allowance . . . . .	673 18 69	
Superannuation Charges . . . . .	59 15 56	
Medical Benefits . . . . .	10 12 26	
Wages etc.,—African Staff . . . . .	369 18 35	
	<hr/>	4,077 16 57
<b>Running Expenses—</b>		
PREMISES		
Maintenance of Buildings etc. . . . .	210 13 54	
Alterations to Buildings . . . . .	150 12 74	
Electricity and Fuel . . . . .	176 12 31	
Water and Conservancy . . . . .	91 2 84	
Cleaning Materials . . . . .	114 17 19	
Rates . . . . .	50 0 00	
Renewals Reserve Contribution . . . . .	150 0 00	
<b>Supplies, Equipment etc.</b>		
Maintenance of Equipment etc. . . . .	235 18 24	
Provisions . . . . .	1,225 6 64	
Uniforms . . . . .	34 8 05	
<b>Transport</b>		
Locomotion . . . . .	19 17 53	
<b>Establishment Expenses</b>		
Printing, Stationery and Advertising . . . . .	28 9 88	
Telephone . . . . .	31 4 40	
Insurances . . . . .	10 2 50	
<b>Miscellaneous</b>		
Loans Fund Expenses . . . . .	24 13 92	
Other Expenses . . . . .	4 2 90	
	<hr/>	2,558 2 68
<b>Loan Charges—</b>		
Principal . . . . .	558 19 88	
Interest . . . . .	762 12 05	
	<hr/>	1,321 11 93
 <i>Carried forward</i> . . . . .		<hr/> 102,546 0 60



# INCOME

## Day Nurseries—(Continued) :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		83,363 0 29
<b>European—Woodley</b>		
Fees . . . . .		5,682 6 95

<i>Carried forward</i> . . . . .	<hr/> 89,045 7 24
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## EXPENDITURE

### Day Nurseries—(Continued) :

<i>Brought forward</i>	.	.	.	.	.	.	£ s. cts.	£ s. cts.
								102,546 0 60
<b>Asian—High Ridge</b>								
EMPLOYEES—								
Salaries . . . . .	.	.	.	.	.	.	1,497 2 39	
Salary Arrears—1954 . . . . .	.	.	.	.	.	.	127 0 86	
Special Temporary Allowances . . . . .	.	.	.	.	.	.	296 10 58	
Superannuation Charges . . . . .	.	.	.	.	.	.	63 12 99	
Medical Benefits . . . . .	.	.	.	.	.	.	6 13 63	
Wages etc.,—African Staff . . . . .	.	.	.	.	.	.	163 5 39	
							<hr/>	2,154 5 84
<b>Running Expenses—</b>								
PREMISES—								
Maintenance of Buildings and Grounds . . . . .	.	.	.	.	.	.	104 9 96	
Fencing . . . . .	.	.	.	.	.	.	3 5 00	
Electricity and Fuel . . . . .	.	.	.	.	.	.	140 8 35	
Water and Conservancy . . . . .	.	.	.	.	.	.	38 9 35	
Cleaning Materials . . . . .	.	.	.	.	.	.	29 17 71	
Rates . . . . .	.	.	.	.	.	.	149 10 00	
Renewals Reserve Contribution . . . . .	.	.	.	.	.	.	85 0 00	
<b>Supplies, Equipment etc.—</b>								
Maintenance of Equipment, etc. . . . .	.	.	.	.	.	.	98 8 40	
New Equipment . . . . .	.	.	.	.	.	.	7 2 80	
Provisions . . . . .	.	.	.	.	.	.	597 4 64	
Uniforms . . . . .	.	.	.	.	.	.	14 2 84	
<b>Establishment Expenses—</b>								
Printing Stationery and Advertising . . . . .	.	.	.	.	.	.	8 0 91	
Telephone . . . . .	.	.	.	.	.	.	14 17 40	
Insurances . . . . .	.	.	.	.	.	.	3 7 50	
Other Expenses . . . . .	.	.	.	.	.	.	7 4 00	
							<hr/>	1,301 8 86
<i>Carried forward</i>	.	.	.	.	.	.		<hr/> 106,001 15 30

# INCOME

## Day Nurseries—(Continued) :

	£	s.	cts.	£	s.	cts.
<i>Brought forward</i> . . . . .	89,045	7	24			
<b>Asian—High Ridge</b>						
Fees . . . . .	2,453	7	50			

<i>Carried forward</i> . . . . .	91,498	14	74
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## EXPENDITURE

### Maternity and Child Welfare :

#### European—

##### EMPLOYEES—

Salaries . . . . .	1,237 0 79	
Salary Arrears—1954 . . . . .	56 3 00	
Special Temporary Allowances . . . . .	163 16 64	
Superannuation Charges . . . . .	59 2 93	
Provident Fund Contributions . . . . .	59 19 98	
Passages Reserve Contribution . . . . .	55 0 00	
Medical Benefits . . . . .	6 13 63	
	<hr/>	1,637 16 97

#### Running Expenses—

##### PREMISES—

Maintenance of Furniture, etc. . . . .	36 17 45	
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#### Supplies, Equipment, etc.

Medical Stores and Equipment . . . . .	48 10 41	
Purchase of Infant Foods . . . . .	233 8 63	
Uniforms . . . . .	5 6 02	

#### Transport

Locomotion . . . . .	179 3 99	
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#### Establishment Expenses

Printing, Stationery and Advertising . . . . .	12 18 00	
	<hr/>	516 4 50
Loan Charges . . . . .		125 0 00

118

<i>Carried forward</i> . . . . .	<hr/> 108,280 16 77
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INCOME

Maternity and Child Welfare :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		91,498 14 74
European		
Sale of Foods . . . . .		218 13 70

<i>Carried forward</i> . . . . .	<hr/> 91,717 8 44
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## EXPENDITURE

### Maternity and Child Welfare—(Continued) :

<i>Brought forward</i>							£ s. cts.	£ s. cts.
								108,280 1677
<b>Asian—</b>								
EMPLOYEES—								
Salaries	.	.	.	.	.	.	6,172 3 42	
Salary Arrears—1954	.	.	.	.	.	.	498 5 07	
Special Temporary Allowances	.	.	.	.	.	.	1,066 6 23	
Superannuation Charges	.	.	.	.	.	.	419 12 40	
Provident Fund Contributions	.	.	.	.	.	.	94 3 11	
Passages Reserve Contribution	.	.	.	.	.	.	105 0 00	
Medical Benefits	.	.	.	.	.	.	42 1 66	
Wages etc.,—African Staff	.	.	.	.	.	.	434 4 01	
								8,831 15 90
<b>Running Expenses—</b>								
PREMISES—								
Maintenance of Buildings	.	.	.	.	.	.	262 18 78	
Maintenance of Furniture etc.	.	.	.	.	.	.	86 17 20	
NEW FURNITURE AND FITTINGS—								
Fencing	.	.	.	.	.	.	61 7 93	
Electricity and Fuel	.	.	.	.	.	.	133 2 14	
Water and Conservancy	.	.	.	.	.	.	30 18 30	
Cleaning Materials	.	.	.	.	.	.	50 7 04	
Rates	.	.	.	.	.	.	337 0 00	
Renewals Reserve Contribution	.	.	.	.	.	.	150 0 00	
<b>Supplies, Equipment etc.,</b>								
Medical Stores and Equipment	.	.	.	.	.	.	180 7 47	
New Equipment	.	.	.	.	.	.	65 0 09	
Purchase of Infant Foods	.	.	.	.	.	.		
Uniforms	.	.	.	.	.	.	64 13 05	
<b>Transport</b>								
Locomotion	.	.	.	.	.	.	351 14 03	
Other Transport	.	.	.	.	.	.	564 13 13	
<b>Establishment Expenses</b>								
Printing, Stationery and Advertising	.	.	.	.	.	.	117 9 40	
Telephone	.	.	.	.	.	.	15 12 40	
Insurances	.	.	.	.	.	.	6 19 51	
<b>Miscellaneous</b>								
Health Visitors Training Scheme	.	.	.	.	.	.	31 13 35	
Midwives and Dais Training Scheme	.	.	.	.	.	.	61 3 55	
Loans Fund Expenses	.	.	.	.	.	.	5 9 46	
								2,577 6 83
<b>Loan Charges—</b>								
Principal	.	.	.	.	.	.	107 6 73	
Interest	.	.	.	.	.	.	113 0 66	
								220 7 39
<i>Carried forward</i>	.	.	.	.	.	.		119,910 6 89

# INCOME

## Maternity and Child Welfare—(Continued) :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		91,717 8 44
<b>Asian</b>		
Training Fees . . . . .	35 0 00	
Other Income . . . . .	17 7 50	
	<hr/>	52 7 50

<i>Carried forward</i> . . . . .	<hr/>	91,769 15 94
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## EXPENDITURE

### Maternity and Child Welfare—(Continued) :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		119,910 6 89
<b>African</b>		
EMPLOYEES—		
Salaries . . . . .	8,101 16 09	
Salary Arrears—1954 . . . . .	655 6 82	
Special Temporary Allowances . . . . .	1,330 14 69	
Superannuation Charges . . . . .	160 12 05	
Provident Fund Contributions . . . . .	285 8 35	
Passages Reserve Contribution . . . . .	690 0 00	
Medical Benefits . . . . .	47 19 04	
Wages etc.,—African Staff . . . . .	3,577 19 94	
	<hr/>	14,849 16 98
<b>Running Expenses—</b>		
PREMISES—		
Maintenance of Buildings . . . . .	194 3 76	
Maintenance of Furniture, etc. . . . .	135 19 78	
Electricity . . . . .	94 9 18	
Water and Conservancy . . . . .	50 12 93	
Cleaning Materials . . . . .	66 10 30	
Rents . . . . .	167 17 00	
Rates . . . . .	128 0 00	
<b>Supplies, Equipment, etc.</b>		
MEDICAL STORES AND EQUIPMENT —		
Clinics . . . . .	1,096 12 67	
Midwives . . . . .	9 12 43	
New Equipment . . . . .	62 15 64	
Teaching Unit . . . . .	12 3 00	
Purchase of Infant Foods . . . . .	47 0 80	
Uniforms . . . . .	164 7 76	
<b>Transport</b>		
Locomotion . . . . .	286 18 16	
Other Transport . . . . .	1,081 6 75	
<b>Establishment Expenses</b>		
Printing, Stationery and Advertising . . . . .	187 15 24	
Telephone . . . . .	125 3 58	
Insurances . . . . .	8 14 75	
<b>Miscellaneous</b>		
Christmas Parties . . . . .	29 18 79	
Loans Fund Expenses . . . . .	4 0 08	
Other Expenses . . . . .	13 00	
	<hr/>	3,954 15 60
<b>Loan Charges—</b>		
Principal . . . . .	112 18 32	
Interest . . . . .	146 10 43	
	<hr/>	259 8 75
 <i>Carried forward</i> . . . . .		 <hr/> 138,974 8 22



# INCOME

## Maternity and Child Welfare—(Continued)

	£	s.	cts.	£	s.	cts.
<i>Brought forward</i> . . . . .				91,769	15	94
<b>African</b>						
Fees . . . . .	407	10	50			
Sale of Foods . . . . .	55	18	02			
	<hr/>			463	8	52

<i>Carried forward</i> . . . . .	<hr/>	92,233	4	46
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## EXPENDITURE

### Lady Grigg Maternity and Training Hospital :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		138,974 8 22
<b>Employees—</b>		
Salaries . . . . .	5,883 2 16	
Salary Arrears—1954 . . . . .	539 4 10	
Special Temporary Allowances . . . . .	990 4 17	
Superannuation Charges . . . . .	267 9 71	
Provident Fund Contributions . . . . .	72 14 98	
Passages Reserve Contribution . . . . .	165 0 00	
Medical Benefits . . . . .	32 4 52	
Wages etc.,—African Nursing Staff . . . . .	1,857 18 51	
Wages etc.,—African Domestic Staff . . . . .	1,581 14 24	
Passages—New Appointments . . . . .	122 8 00	
	<hr/>	11,512 0 39
<b>Running Expenses—Premises</b>		
Maintenance of Buildings . . . . .	636 15 44	
Alterations to Buildings . . . . .	325 6 87	
Maintenance of Furniture, Etc. . . . .	147 17 43	
Exterior Decoration . . . . .	94 16 88	
Maintenance of Grounds . . . . .	178 17 24	
Electricity and Fuel . . . . .	1,251 2 20	
Water and Conservancy . . . . .	572 9 60	
Cleaning Materials . . . . .	513 8 75	
Rents . . . . .	97 10 00	
Renewals Reserve Contribution . . . . .	500 0 00	
<b>Supplies, Equipment, etc.</b>		
New Equipment, etc. . . . .	195 15 48	
Linen and Cutlery . . . . .	475 17 10	
Medical Stores . . . . .	1,332 1 63	
Provisions . . . . .	3,140 18 01	
Uniforms . . . . .	209 1 99	
<b>Transport</b>		
Locomotion . . . . .	106 5 83	
Other Transport . . . . .	888 15 12	
<b>Establishment Expenses—</b>		
Printing, Stationery and Advertising . . . . .	211 7 34	
Telephone . . . . .	80 19 67	
Insurances . . . . .	28 1 39	
<b>Miscellaneous</b>		
Consultant and Anaesthetists Fees . . . . .	141 15 00	
Recreation and English Tuition . . . . .	39 7 35	
Loans Fund Expenses . . . . .	38 10 08	
Other Expenses . . . . .	9 7 50	
	<hr/>	11,216 7 90
<b>Loan Charges—</b>		
Principal . . . . .	1,231 11 55	
Interest . . . . .	1,255 16 49	
	<hr/>	2,487 8 04
<b>Revenue Contributions to Capital Outlay—</b>		
Layout of Grounds . . . . .		678 2 52
		<hr/>
<i>Carried forward</i> . . . . .		164,868 7 07

## INCOME

### Lady Grigg Maternity and Training Hospital :

		£ s. cts.	£ s. cts.
<i>Brought forward</i>	. . . . .		92,233 4 46
Fees	. . . . .	3,152 9 00	
Trainees Board	. . . . .	446 17 00	
Rent—V.D. Clinic	. . . . .	360 0 00	
		<hr/>	3,959 6 00

<i>Carried forward</i>	. . . . .	<hr/>	96,192 10 46
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## EXPENDITURE

### Ambulance Service :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		164,868 7 07
<b>General—</b>		
EMPLOYEES—		
Wages etc.,—Drivers . . . . .	489 10 46	
Pay Arrears—1954 . . . . .	39 11 95	
<b>Running Expenses—</b>		
Equipment . . . . .	13 16 62	
Uniforms . . . . .	20 10 69	
Transport . . . . .	45 19 89	
Renewals Reserve Contribution . . . . .	200 0 00	
	<hr/>	809 9 61
<b>African Estates—</b>		
EMPLOYEES—		
Wages etc.,—Drivers . . . . .	587 9 61	
<b>Running Expenses—</b>		
Transport . . . . .	448 9 12	
Renewals Reserve Contribution . . . . .	200 0 00	
	<hr/>	1,235 18 73
<b>Anti-Malarial Works :</b>		
<b>Construction of Drains—(see opposite)</b>		
<b>Employees—</b>		
Wages etc.,—Artisans . . . . .	13 18 05	
Wages etc.,—African Staff . . . . .	13 8 40	
Stores and Materials . . . . .	8 2 00	
Transport and Plant . . . . .	2 19 58	
Payments to Contractors . . . . .	5,087 9 66	
	<hr/>	5,125 17 69
<b>Maintenance of Drains</b>		
<b>Employees—</b>		
Wages etc.,—Artisans . . . . .	680 18 80	
Wages etc.,—African Staff . . . . .	474 8 10	
Stores and Materials . . . . .	168 12 81	
Transport and Plant . . . . .	249 5 83	
	<hr/>	1,573 5 54
<b>Cleaning of Drains</b>		
<b>Employees—</b>		
Wages etc.,—African Staff . . . . .	1,824 6 49	
Stores and Materials . . . . .	111 13 69	
Transport and Plant . . . . .	742 4 40	
	<hr/>	2,678 4 58
 <i>Carried forward</i> . . . . .		<hr/> 176,291 3 22



## INCOME

### Ambulance Service

	£	s.	cts.	£	s.	cts.
<i>Brought forward</i>	.	.	.	96,192	10	46
Hire Charges	.	.	.	376	14	00

#### Construction of Drains

	£	s.	cts.
Ainsworth Street	1,483	18	13
Balmoral Road	474	14	25
Hurlingham Road	231	17	70
Upper Hill Road	291	12	45
L.R. 37	2,687	16	58
Woodley Estate	181	11	50
Arboretum Road	225	12	92
	<u>5,125</u>	<u>17</u>	<u>69</u>

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<i>Carried forward</i>	.	.	.	.	.	.	96,569	4	46
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## EXPENDITURE

### Funerals and Cemeteries :

	£ s. cts.	£ s. cts.
<i>Brought forward</i> . . . . .		176,291 3 22
<b>Funerals</b>		
<b>Employees—</b>		
Allowances to Staff . . . . .	632 12 00	
<b>Running Expenses—</b>		
Cost of Coffins . . . . .	3,863 1 80	
Lettering Plates . . . . .	102 8 00	
<b>Transport—</b>		
Locomotion . . . . .	72 0 95	
Hearse—Running Expenses . . . . .	117 17 27	
Hearse—Renewals Contribution . . . . .	200 0 00	
Telephones . . . . .	36 15 54	
Central Establishment Charges . . . . .	610 0 00	
	<hr/>	5,634 15 56
<b>Cemeteries :</b>		
<b>Employees—</b>		
Wages etc.,—African Staff . . . . .	1,295 11 40	
<b>Running Expenses—</b>		
<b>Grounds</b>		
Maintenance of Graves and Memorials . . . . .	123 14 95	
Grave Numbering . . . . .	127 10 17	
Special Work ( <i>see opposite</i> ) . . . . .	248 13 48	
Water and Conservancy . . . . .	36 16 30	
<b>Supplies, Equipment, etc.</b>		
Stores . . . . .	15 18 50	
Uniforms . . . . .	33 1 86	
<b>Establishment and Other Expenses</b>		
Insurances . . . . .	22 4 50	
Central Establishment Charges . . . . .	160 0 00	
Loans Fund Expenses . . . . .	12 16	
	<hr/>	2,064 3 32
<b>Loan Charges—</b>		
Principal . . . . .	7 5 68	
Interest . . . . .	12 8 07	
	<hr/>	19 13 75
<b>Revenue Contribution to Capital Outlay—</b>		
New Cemetery—Langata . . . . .		2,000 0 00
 <b>TOTAL</b> . . . . .		 <hr/> <b>£186,009 15 85</b> <hr/>

## INCOME

### Funerals and Cemeteries :

	£	s.	cts.	£	s.	cts.
<i>Brought forward</i> . . . . .				96,569	4	46
Funeral Charges . . . . .	6,275	4	79			
Other Income . . . . .	10	0	00			
	<hr/>			6,285	4	79

<b>Details of Special Work</b>	£	s.	cts.
City Park Cemetery—Layout . . . . .	208	1	10
Forest Road Cemetery—wall and chapel . . . . .	40	12	38
	<hr/>		
	£248	13	48
	<hr/>		

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TOTAL . . . . .	£102,854	9	25
	<hr/>		



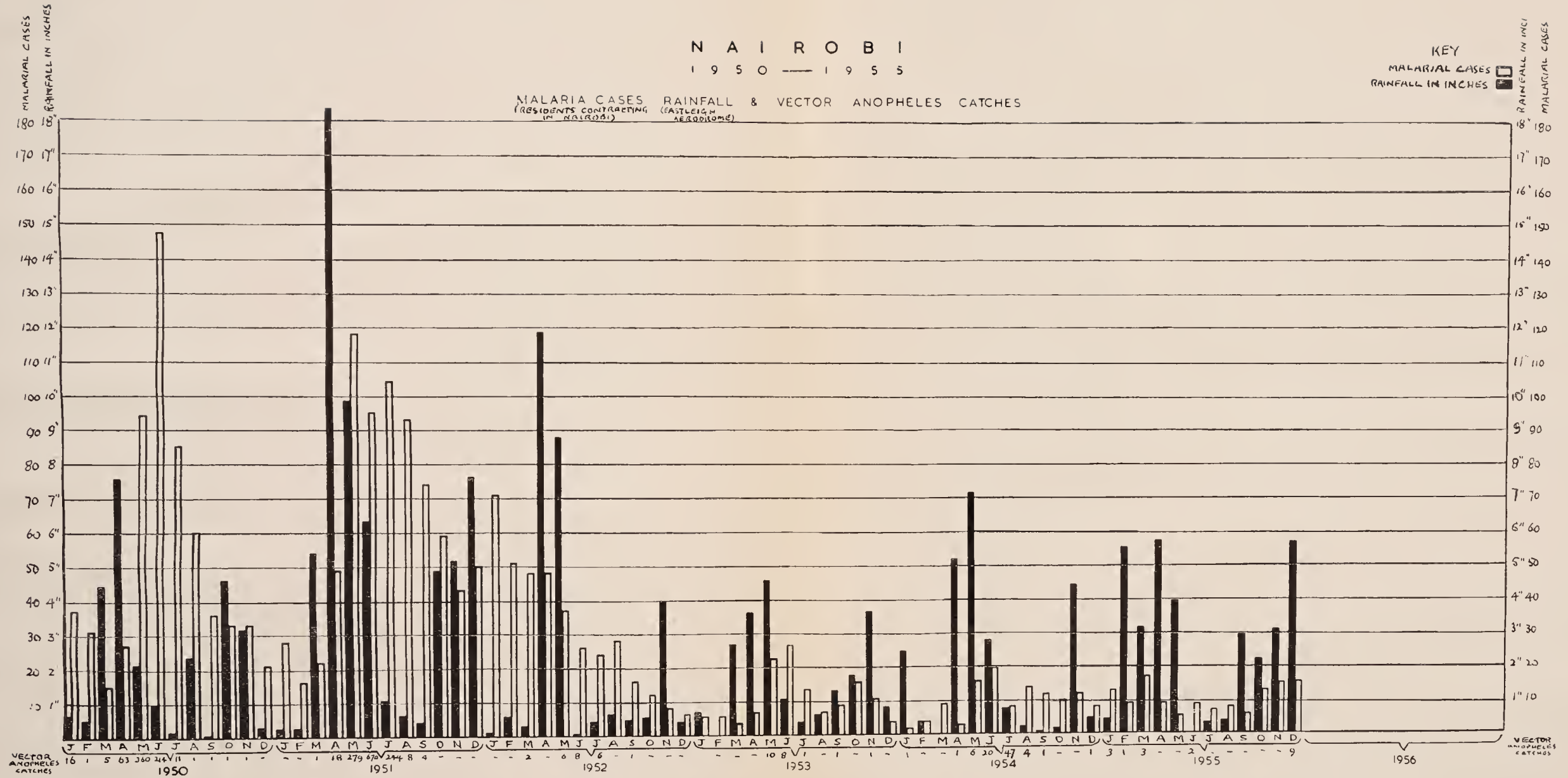


# N A I R O B I

1 9 5 0 — 1 9 5 5

MALARIA CASES (RESIDENTS CONTRACTING IN NAIROBI) RAINFALL & VECTOR ANOPHELES CATCHES (EASTLEIGH AERODROME)

KEY  
MALARIAL CASES  
RAINFALL IN INCHES







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